US ARMY MISSILE AND MUNITIONS CENTER AND SCHOOL Munitions Department Redstone Arsenal, Alabama 35809

CHEMICAL MUNITIONS EOD/TE STUDY GUIDE

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CHEMICAL AGENTS/MUNITIONS

TERMS AND DEFINITIONS

- 1. Chemical Agent A chemical compound which, through its chemical properties, produces lethal or damaging effects on man. Excluded from consideration are riot control agents, chemical herbicides and smoke and flame materials.
- 2. <u>Chemical Agent Symbol</u> The code designation of any chemical agent. For example, HD is the symbol for distilled mustard.
- 3. <u>Persistency</u> An expression of duration of effectiveness of a chemical agent which is dependent on the physical properties of the agent, weather conditions, method of dissemination, and condition of terrain.
- 4. Chemical Agent Casualty A person who has been affected sufficiently by a chemical agent to prevent or seriously degrade his ability to carry out his mission.
- 5. Concentration Amount of chemical per unit volume of air (expressed in mg/m^3).
- 6. Dosage The product of concentration and time.
 - a. Expressed in mg.min/m³.
 - b. Determines degree of physiological action.
- 7. Median Lethal Dosage (LCt $_{50}$) The dosage that will kill 50% of the exposed unprotected personnel.
- 8. Median Incapacitating Dosage (ICt $_{50}$) The dosage that will disable (cause casualties) 50% of the exposed, unprotected personnel.
- 9. Liquid Dosage (LD $_{50}$) The weight of liquid agent received by a person on his skin is usually expressed as dosage in milligrams of contaminant per kilogram of body weight (mg/kg). This is equivalent to parts per million.
- 10. Hydrolysis The chemical reaction of a substance with water.
- 11. Volatility The weight of vapor present in a unit volume of air under equilibrium conditions at a specified temperature. (Rate of evaporation)
- 12. Rendering Safe Procedure (RSP) The tools and methods employed against an explosive device or munition designed to neutralize or otherwise make safe the fuzing system, so that it can be assumed safe for transportation and disposal. Any method which could detonate or initiate the munition would not be considered a true rendering safe disposal procedure.

- 13. <u>Disposal Procedures</u> (DP) A method designed to utilize the most efficient and safest means of eliminating agent fills in explosive ordnance. These methods include neutralization, venting, burning, detonation and burial at sea.
- 14. <u>Point Detonating Fuze</u> (PD) Fuze located in the nose of a projectile, which is initiated upon impact.
- 15. Proximity Fuze (VT) A fuze designed to detonate a projectile, bomb, mine or charge when activated by an external influence in close vicinity of a target. The variable time fuze is one type of proximity fuze.
- 16. Methods of Dissemination.
 - a. <u>Bursters</u> Auxiliary high explosive elements rupture the munition case and force agent out.
- b. <u>Ejection</u> A black powder charge creates pressure to force the contents (i.e., sub-munitions) out of container.
- c. Burning The agent is mixed with a pyrotechnic which, when burned, releases the agent and generates heat which forces the agent from container.
- d. <u>Self-contained Pressure</u> Used to pressurize the agent chamber and force agent out.
- e. Ram Air Allows high speed air to enter the container and force agent out outlet valves in rear. Used on high speed aircraft.
- 17. Precautions and Hazards.
- a. <u>High Explosive</u> the rupturing of a munition case by either a chemical or mechanical explosion with a bursting hazard. There are also the hazards of blast, missile, fragmentation and fire.
- b. Ejection The use of a small powder charge to expel an item such as a canister, flare, sub-munition or bomblet from the main body of the munition or to project the munition in flight.
 - c. Burning Same as a fire hazard.
- d. <u>High Pressure</u> Air or hydraulic system released suddenly and uncontrolled; can cause damage or injury.
 - e. Light Any amount of light which can cause damage or injury.
- f. <u>Electrical</u> Any high voltage which can cause harm to personnel or static electricity which can cause initiation of explosive devices.

- g. <u>Chemical</u> A solid, liquid or gas which, through its chemical properties, produces lethal or damaging effects on man or animals, plants, or material or produces screening or signaling smoke.
- h. Fragmentation (Frag) When detonation occurs, pieces of munitions casing and area objects are thrown off at high velocity in all directions.
- i. <u>Photoflash Powder</u> These compositions are sensitive to heat, shock and friction. They detonate rather than burn.
- j. <u>Separation</u> Mechanical or explosive device to disperse elements of a piece of ordnance after launch or drop--usually mild detonating fuze.

18. Nomenclature Systems.

- a. Army.
 - (1) A standard model is indicated by M followed by a number. (Example: M16)
- (2) Modifications are indicated by the letter A and followed with a number indicating number of modifications made to that particular model. (Example: M16Al indicates first modification.)
- (3) Experimental models are identified by either an XM or E followed by a number. (Example: XM176 or E524)
- (4) Modifications to experimental models will be indicated by either an E (on XM models) or an R (on E models).

Examples: XM176E3 - third modification E524R2 - second modification

- (5) Special Prefixes.
 - (a) AN identifies an item adopted by both Army and Navy. (Example: AN MIA1)
- (b) ABC identifies an item adopted by the US, Britain and Canada. (Example: ABC M25A2)
 - b. Navy.
- (1) Standard items are designated by MK (pronounced MARK) followed by a number. (Example: MK116)
- (2) Modifications are indicated by MOD followed by the number of modifications performed. (Example: MK116 MOD 0)

NOTE: The MOD will be present even when no modifications are made.

- (3) Code names are also used to identify munitions (SAD EYE, PAD EYE, etc.). (Example: MK116 MOD 0 WETEYE)
- (4) Experimental items are indicated by "X" followed by the model number.
 - c. Air Force.
- (1) Item designators consist of two-letter codes which identify type of item and the letter U, which means unit.
 - (a) BLU Bombs & Mines
 - (b) MLU -Miscellaneous Munitions

- (c) SUU Suspension and release units.
- (d) CBU cluster and dispenser units.
- (e) FMU munition fuze units.
- (f) TMU miscellaneous tank units.
- (2) The code letters are followed by model numbers. (Example: BLU17)
- (3) Modifications are indicated by a letter corresponding to the number of modifications made. (Example: BLU 17A A indicates the first modification.)
 - (4) Additional designators and their meanings are:
 - (a) /A retained on aircraft. (Example: 13A/A)
 - (b) /B dropped from aircraft. (Example: BLU 17A/B)

EXPLOSIVE TRAIN

CLASSIFICATION OF CHEMICAL AGENTS AS TO TACTICAL USE AND PHYSIOLOGICAL EFFECTS

TACTICAL USE

PHYSIOLOGICAL EFFECTS AGENT

		* <u>HD</u> * <u>H</u> * <u>HT</u>	(Distilled Mustard) (Mustard) (HD and Agent T)
	BLISTER AGENTS	HN L HL CX	(Nitrogen Mustard) (Lewisite) (Mustard and Lewisite) (Phosgene Oxime)
		MR	(Simulated Mustard)
TOXIC CHEMICAL AGENTS	NERVE AGENTS	GA GB GD VX	(TABUN) (SARIN) (SOMAN)
	BLOOD AGENTS	AC * <u>CK</u>	(Hydrogen Cyanide) (Cyanogen Chloride)
	CHOKING AGENTS	*CG	(Phosgene)
RIOT CONTROL AGENTS	TEAR AGENTS	*CNC	(Chloroacetophenone) (Chloroacetophenone and Magnesium Oxide) (Chloroacetophenone in Chloroform Solution) (Chloroacetophenone and Chloropicrin in Chloroform Solution) (Chloroacetophenone in Benzene and Carbon-Tetrachloride Solution) (O-Chlorobenzalmalono-nitrile)
			·

CLASSIFICATION OF CHEMICAL AGENTS AS TO TACTICAL USE AND PHYSIOLOGICAL EFFECTS (Cont)

TACTICAL USE	PHYSIOLOGICAL EFFECTS	AGEN	<u>VT</u>
RIOT CONTROL AGENTS	TEAR AGENTS	CS1 CS2	(O-Chlorobenzalmalono- nitrile and Silica Gel Aerogal) (O-Chlorobenzalmalono- nitrile and Silica Gel Aerogal and Hexamethyl- Disilazene) (O-Chlorobenzalmalono- nitrile in Trioctyl- Phosphate Solution)
	VOMITING AGENTS	DM	(Adamsite)
INCAPACITATING AGENTS	INCAPACITATING	BZ	Birkler Berdinderschie der die der der den im Berngeschienings vir seine geweine zu zu der der der der der der

CLASSIFICATION OF CHEMICAL AGENTS AS TO TACTICAL USE

TACTICAL USE	AGENT	
SCREENING SMOKES	WP (White Phosphorous) PWP (Plasticized White Phosphorous) HC (Mixture) FS (Sulfur Trioxide-Chlorosulfonic Acid Solution)	
SIGNALING SMOKES	VS (Violet Smoke) RS (Red Smoke) GS (Green Smoke) YS (Yellow Smoke) OS (International Orange Smoke)	

CLASSIFICATION OF CHEMICAL AGENTS AS TO TACTICAL USE (Cont)

TACTICAL USE	AGENT
INCENDIARIES	 *TH1 (Thermite-Metal Mixture) TH3,4 (Thermate-Metal Mixture) *PT-1 (Oil and Metal Mixture) PT-V (Oil and Metal Mixture) IM (Unthickened Fuel Mixture) NP (Thickened Fuel Mixture) TPA (Thickened Pyrophoric Agent) TEA (Triethyl Aluminate)

<u>Underscore</u> indicates Standard A Item (an item not expected to become obsolete during a 5-year period).

*Underscore (*___) indicates Standard B Item (currently acceptable item expected to become obsolete during a 5-year period).

NERVE AGENTS

SYMBOL	Tabun GA	Sarin	Soman GD	VX
TACTICAL USE	Quick-acting toxic cml agt	Quick-acting toxic cml agt	Quick-acting toxic cml agt	Moderately quick-acting
STANDARDI- ZATION		Standard A	and 1000 lips and 1000 and APR 1000 SUA 1000	toxic cml agt Standard A
BOILING POINT	475°F(246°C)	297°F(147°C)	333°F(167°C)	مثلثة قريع بسنة ماها إليه باري مديد بعد (يسم يستد
FREEZING POINT	-56°F to -58°F (-49°C to -50°C)	-69°F(-56°C)	Not frozen	
STATE OF MATTER	Colorless to brown liquid	Colorless liquid	Colorless liquid	Colorless liquid
FLASH POINT	Too high to be of military significance			
DURATION OF EFFECTIVE- NESS*	Normally non- persistent	Normally non- persistent	Normally non- persistent	Normally Persistent
DECONTAMI- NATION	Slurry or dilute alkali; hot soapy water	Slurry or dilute alkali; hot soapy water	Slurry or dilute alkali; hot soapy water	Bleach, Danc, DS-2 or 5% Sodium Hypochlorite
PHYSIO- LOGICAL ACTION	Nerve Agent	Nerve Agent	Nerve Agent	Nerve Agent
RATE OF ACTION	Very rapid	Very rapid	Very rapid	Moderately rapid
EYE & SKIN TOXICITY	Very high	Very high	Very high	Very high
PROTECTION REQUIRED	Protective Mask; pro- tective clothing	Protective Mask; pro- tective clothing	Protective Mask; pro- tective clothing	Protective Mask; pro- tective clothing

^{*} Depends on weather conditions and method of dispersion, terrain, and characteristics of the agent.

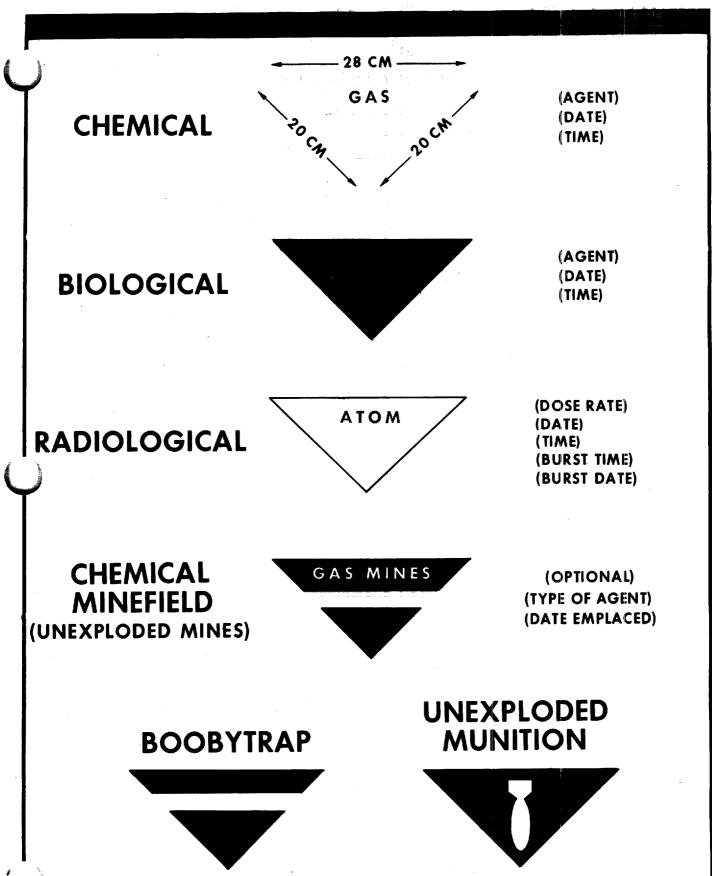
WORKING PARTY - RECOMMENDED PROTECTIVE CLOTHING

Clothing	Nerve	Blister	Agent Liquid Bio	Blood Choking	Dry Bio Incap Riot	Liquid Smoke	Rocket Fuels & Oxidizers	Foreign Chemicals (Unknown)
Impregnated undergarments (drawers, shirt, socks, gloves)	(1)	X	X					X
Coveralls, TAP (cooling suit as req)	X	X	X					X
Coveralls, RFH (do)							·X	
Coveralls, explosive handlers or	- · · <u>-</u>							
field clothing	(2)			X	X	X	X	
Boots, TAP (3)	X	X	X			X	X	
Boot Covers, TAP	X	X	X	X	X	X		X
Boots, Combat				X	X			
Hood, TAP	X	X	X					X
Hood, M6A2				X	X	X		
Hood, RFH							X	
Protective Mask, M17A1				X(6)	X(6)	X(6)		
Protective Mask, M9A1	X	X	X	X(6)	X(6)	X(6)		X
Self-contained Breathing Apparatus	(4)						X	
Gloves, Cotton				X	<u>X</u>			
Gloves, Surgeons or Plastic	(2)					X		
Gloves, TAP	X	X	X	X	X	X		X
Gloves, RFH, Gray							X	
Gloves, RFH, Red							0xidizers	
Gloves, RFH, Green							Fuels	
Apron, TAP				X(5)	X(5)	X		

- 1. V-series only.
- 2. G-series only.
- 3. Boots, rubber, may be substituted if Boot Cover, TAP, is worn.
- 4. Self-contained breathing apparatus should be used in lieu of protective masks whenever an oxygen deficient atmosphere exists or in closed areas where high agent concentrations may exist.
- 5. Apron, TAP, is used as protection from liquid decontaminants.
- 6. Either the M9A1 or the M17A1 mask can be worn.

TAP - Toxicological Agent Protective

RFH - Rocket Fuel Handlers



SURFACE OF MARKER FACES AWAY FROM DANGEROUS AREA (FRONT)

COMMERCIAL CHEMICAL MUNITIONS COLOR CODE

Red - CN Riot Control Agent

Green - DM Riot Control Agent

Blue - CS Riot Control Agent

Yellow - HC Smoke

The above color code is used by the following commercial companies. The complete round will be colored or the end caps will be painted to match the filler.

Penguin Industries

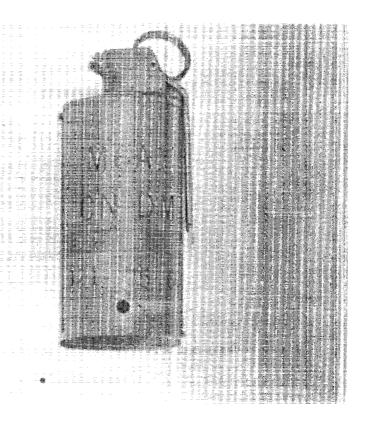
Federal Laboratories

Lake Erie Company

Brunswick Corporation

AAI Incorporated

Smith & Wesson Chemical Company



GRENADE, HAND, RIOT, M6A1

AGENT/FILLER:

CN-DM Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

.58 1bs

DIMENSIONS:

4.5 inches high; 2.5 inches diameter

WEIGHT:

1 1b

FUZE:

M201A1 igniting 1.2 to 2 second delay

HAZARDS:

Agent and Burning

COLOR CODE: OLD:

-

NEW:

Same as above

DISPOSAL:

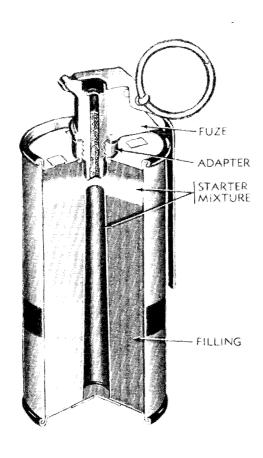
Burn

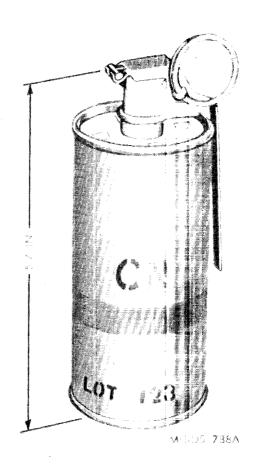
GENERAL INFORMATION:

The M6Al riot control grenade is the only US chemical munition that is loaded with two agents at the same

Gray body with one red band with all markings in red

time. The filler is 50% CN and 50% DM.





GRENADE, HAND, RIOT, M7/M7A1

AGENT/FILLER: CN Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 10-1/2 oz for M7; 12-1/2 oz for M7A1

DIMENSIONS: 4.5 inches high; 2.5 inches diameter

WEIGHT: M7 - 17 oz; M7A1 - 18-1/2 oz

FUZE: M201A1 igniting 1.2 to 2 seconds delay

HAZARDS: Agent and Burning

COLOR CODE: OLD: Gray body with one red band with all markings in red

NEW: Same

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The M7 and M7Al are riot control grenades of the

burning type. The only difference is the amount

of agent and the way they are filled.



GRENADE, HAND, RIOT, ABC-M7A3

AGENT/FILLER:

CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 9-1/2 oz

DIMENSIONS:

4.5 inches high; 2.5 inches diameter

WEIGHT:

1 1b

FUZE:

M201Al 2-second delay

HAZARDS:

Burning and Agent

COLOR CODE: OLD:

Gray body with one red band and all markings in red

NEW:

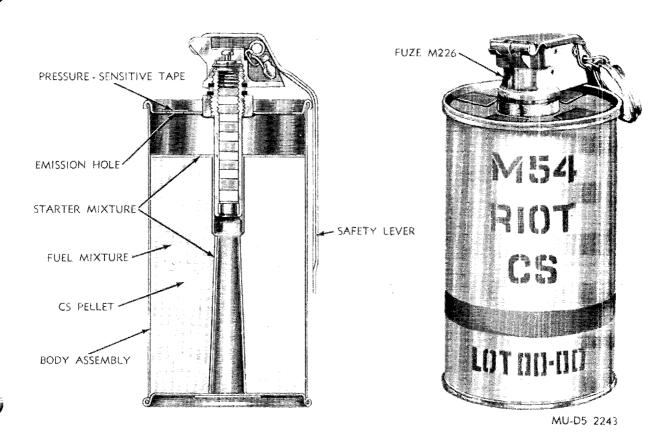
Same as above

DISPOSAL:

Burn

GENERAL INFORMATION:

The ABC-M7A3 riot control grenade is used to control riots and other disturbances.



GRENADE, HAND, RIOT, M54

AGENT/FILLER:

CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 9-1/2 oz

DIMENSIONS:

4.5 inches high; 2.5 inches diameter

WEIGHT:

1 1b

FUZE:

M226 Igniting 8 to 12 seconds delay

HAZARDS:

Agent and Burning

COLOR CODE: NEW:

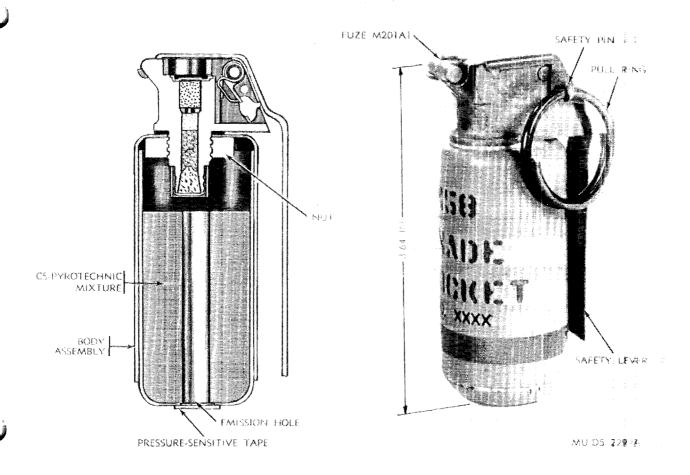
Gray body with one red band with all markings in red

DISPOSAL:

Burn

GENERAL INFORMATION:

The M54 riot control grenade is an M7A3 grenade body with an M226 fuze, so that it can be dropped from an aircraft by hand or from an aircraft dispenser.



GRENADE, HAND, RIOT, POCKET, XM58

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 42 grains

DIMENSIONS: 3.5 inches high; 1-1/4 inches diameter

WEIGHT: .26 lbs

FUZE: M201A1E1 igniting 3 to 4 seconds delay

HAZARDS: Agent and Burning

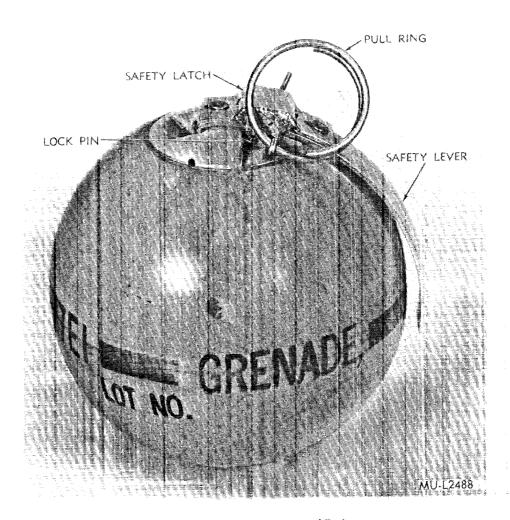
COLOR CODE: NEW: Gray body with one red band with all markings in red.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The XM58 CS Pocket Grenade is a small burning type

grenade used for riot control and will burn for about

8 to 28 seconds.



GRENADE, HAND, RIOT, XM47E1

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: .44 1bs

DIMENSIONS: 3.5 inches diameter

WEIGHT: 0.85 1bs

FUZE: XM227E1 2 to 3 seconds delay

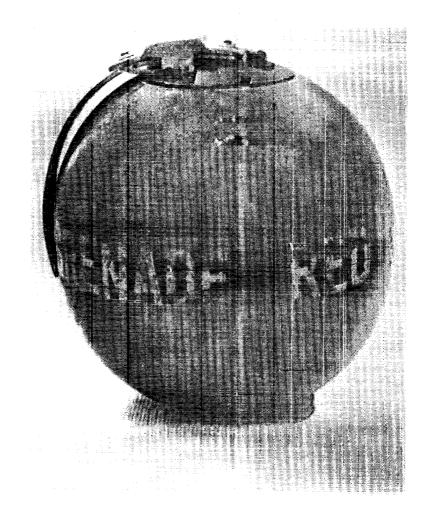
HAZARDS: Agent and burning

COLOR CODE: NEW: Gray body with one red band with all markings in red

DISPOSAL: Burn

GENERAL INFORMATION: The XM47El riot control grenade is used to control

riots. It is a burning type that will skitter on the ground as it burns. It has a rubber body.



GRENADE, HAND, SMOKE, XM48E1

AGENT/FILLER: Red Smoke Mixture

WEIGHT OF AGENT/FILLER: .33 1bs

DIMENSIONS: 3.5 inches diameter

WEIGHT: 0.75 lbs

FUZE: XM227E1 2 to 3 second delay

HAZARDS: Burning

COLOR CODE: Gray body with a light green band with white or black

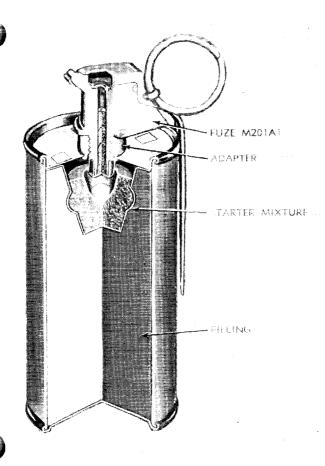
markings on the band

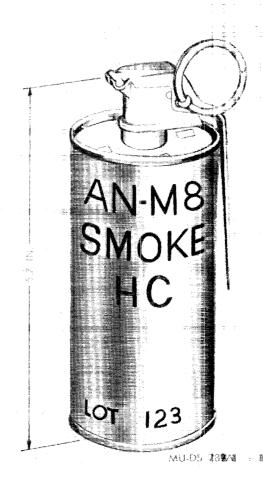
DISPOSAL: Burn

GENERAL INFORMATION: The XM48El smoke grenade is used as a training grenade

for the XM47E1 CS riot control grenade; it is the same

size and weight, only the filler is different.





GRENADE, HAND, SMOKE, AN-M8

AGENT/FILLER: HC Smoke Mixture

WEIGHT OF AGENT/FILLER: 1.2 1bs

DIMENSIONS: 4.5 inches high, 2.5 inches diameter

WEIGHT: 1.5 1b

FUZE: M201A1 igniting 2 second delay

HAZARDS: Agent and Burning

COLOR CODE: OLD: Gray body with one yellow band with all markings in

yellow

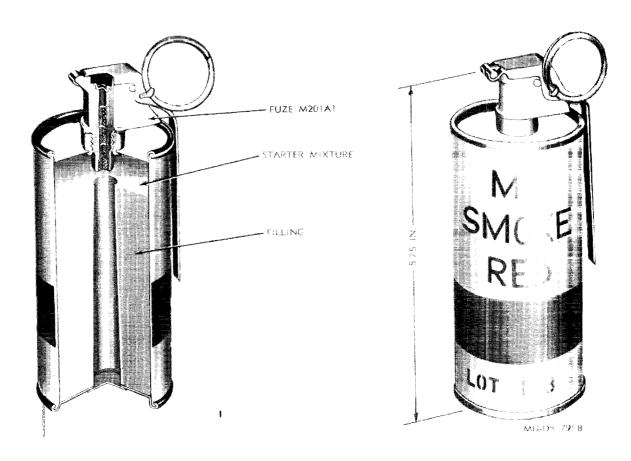
NEW: Light green body with all markings in black and a

white top

GENERAL INFORMATION: The AN-M8 HC Smoke Grenade produces a dense white

smoke for signaling or screening use, and will burn

for about 105 to 150 seconds.



GRENADE, HAND, SMOKE, COLORED, M18

AGENT/FILLER: Colored Smoke Mixture (red, green, yellow, violet)

WEIGHT OF AGENT/FILLER: .73 1bs

DIMENSIONS: 4.5 inches high; 2.5 inches diameter

WEIGHT: 1.2 1bs

FUZE: M201A1 igniting, 2 second delay

HAZARDS: Burning

COLOR CODE: OLD: Gray body with one yellow band and all markings in

yellow with the top cap the color of the smoke.

NEW: Light green body with all markings in black and the

top cap the color of the smoke.

OD body with all markings in light green with the

top cap the color of the smoke.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The M18 colored smoke grenade is used for signaling

and will burn for about 50 to 90 seconds.

GRENADE, RIFLE, COLORED SMOKE, M22A2

AGENT/FILLER: Colored Smoke Mixture (Red, Green, Yellow, Violet)

WEIGHT OF AGENT/FILLER: 0.4 1bs

DIMENSIONS: 10.72 inches long; 1.8 inches diameter

WEIGHT: 1.26 lbs

FUZE: Mechanical Impact Igniter

HAZARDS: Burning

COLOR CODE: OLD: Gray body with one yellow band and all markings in

yellow, with the base cap the color of the smoke.

NEW: Light green body with all markings in black, with

the base cap the color of the smoke.

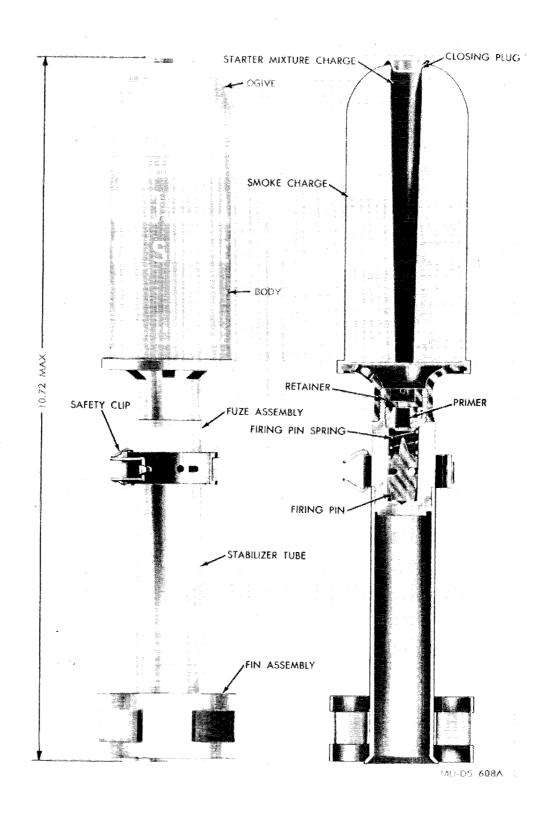
OD body with all markings in light green, with the

base cap the color of the smoke.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The M22 or M22A2 Rifle Grenade is used to mark

targets and is fired from a rifle.



GRENADE, RIFLE, COLORED SMOKE, M22A2

GRENADE, RIFLE, COLORED SMOKE, STREAMER, M23A1

AGENT/FILLER:

Colored Smoke Mixture (red, green, yellow, violet)

WEIGHT OF AGENT/FILLER:

0.4 lbs

DIMENSIONS:

9.89 inches long; 1.8 inches diameter

WEIGHT:

1.26 lbs

FUZE:

Igniting

HAZARDS:

Burning

COLOR CODE: OLD:

Gray body with one yellow band and all markings in yellow, with the base cap the color of the smoke.

NEW:

Light green body with all markings in black with

the base cap the color of the smoke.

OD body with all markings in light green and the

base cap the color of the smoke.

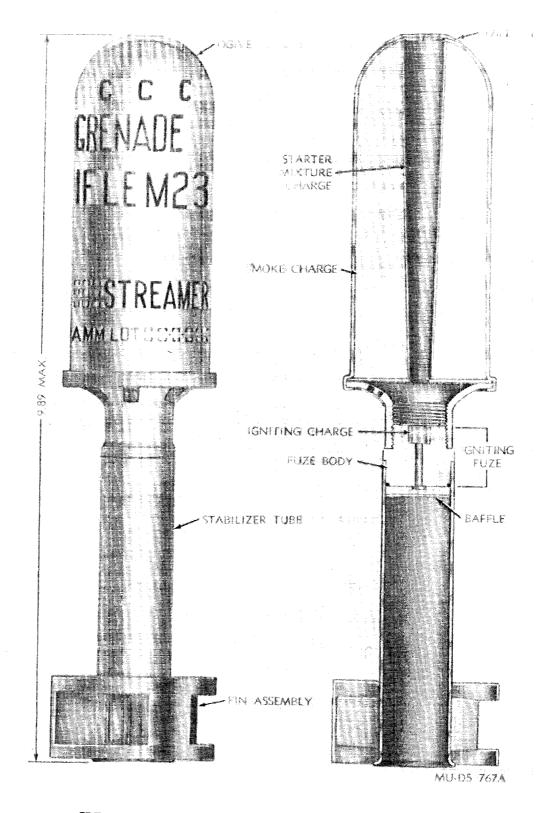
DISPOSAL:

Burn or Detonate

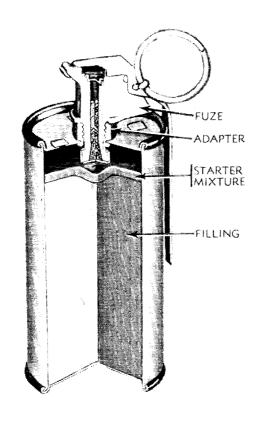
GENERAL INFORMATION:

The M23Al Rifle Grenade is used for signaling only,

and is a burning type grenade.



GRENADE, RIFLE, COLORED SMOKE, STREAMER, M23A1





GRENADE, HAND, INCENDIARY TH3, AN-M14

AGENT/FILLER:

TH3

WEIGHT OF AGENT/FILLER: 26.5 oz

DIMENSIONS:

4.5 inches high; 2.5 inches diameter

WEIGHT:

32 oz

FUZE:

M201A1 igniting, 2 seconds delay

HAZARDS:

Burning and Light

COLOR CODE: OLD:

Gray body with one purple band with all markings in

purple.

NEW:

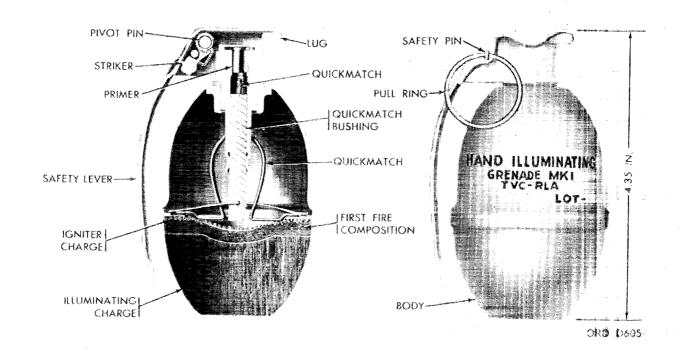
Red body with all markings in black

DISPOSAL:

Burn

GENERAL INFORMATION:

The grenade is used to destroy equipment.



GRENADE, HAND, ILLUMINATING, MK-1

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

3.5 oz

DIMENSIONS:

4.35 inches high; 2.19 inches diameter

WEIGHT:

10 oz

FUZE:

Igniting 7 seconds delay

HAZARDS:

Burning and light at close range.

COLOR CODE: OLD:

OD with black markings.

NEW:

White with black markings.

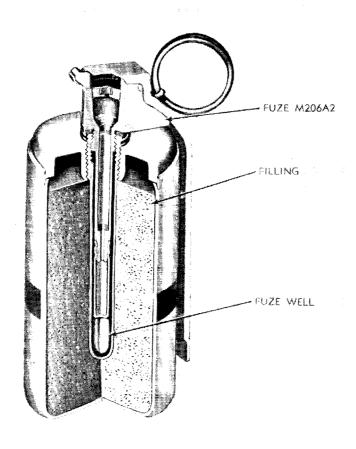
DISPOSAL:

Burn or Detonate

GENERAL INFORMATION:

The MK-1 illuminating grenade is used for illuminating and signaling; it has a candle power of 55,000. Possible

hazard due to separation of candle from main body.





GRENADE, HAND, SMOKE, M15

AGENT/FILLER: WP

WEIGHT OF AGENT/FILLER: .94 1bs

DIMENSIONS: 4.5 inches high; 2-3/8 inches diameter

WEIGHT: 31 oz

M206Al Bursting Type, 4 to 5 seconds delay FUZE:

High Explosive, Burning, and Fragmentation HAZARDS:

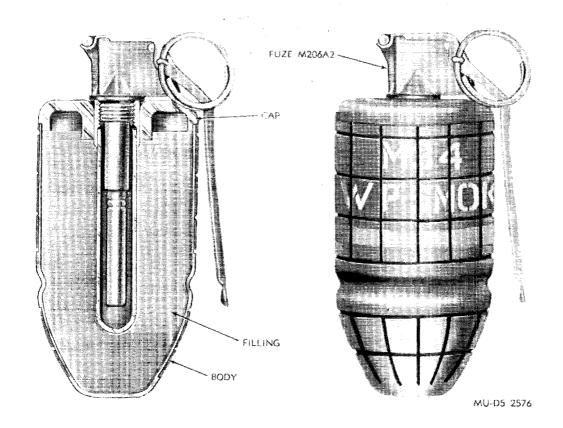
COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

DISPOSAL: Detonate

The M15 is a bursting type grenade, with a casualty radius of 15 meters. The WP smoke can be thrown GENERAL INFORMATION:

up to 30 meters.



GRENADE, HAND AND RIFLE, SMOKE, M34

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER:

.94 1bs

DIMENSIONS:

5.5 inches high; 2-3/8 inches diameter

WEIGHT:

1-1/2 1bs

FUZE:

M206A2 Bursting Type, 4 to 5 second delay

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band with all markings

in yellow.

NEW:

Light green body with one yellow band and all markings

in red.

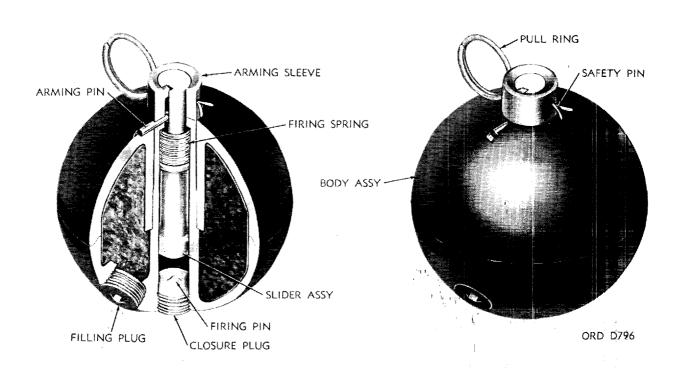
DISPOSAL:

Detonate

GENERAL INFORMATION:

The M34 smoke grenade is a bursting type with a

casualty radius of 35 meters.



GRENADE, HAND, RIOT, ABC-M25A2

AGENT/FILLER: CN-1, CS-1, DM-1, TI-Talc

WEIGHT OF AGENT/FILLER: .221 lbs

3 inch diameter spherical

WEIGHT: 1/2 1b

DIMENSIONS:

FUZE: 1.4 to 3 second delay bursting

HAZARDS: Agent and High Explosive

COLOR CODE: OLD: Brown body with one red band and all markings in red.

> NEW: Gray body with one red band with all markings in red

and may also have a 1/4" yellow band.

DISPOSAL: Detonate

GENERAL INFORMATION: The ABC-M25A2 riot control grenade is a bursting type

which is filled with a dry powdered agent.

GRENADE, RIFLE SMOKE, M19A1

AGENT/FILLER:

WEIGHT OF AGENT/FILLER: 8.5 oz

DIMENSIONS:

11.31 inches long; 2 inches diameter

WEIGHT:

1.5 lbs

FUZE:

Impact

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band with all markings in

yellow.

NEW:

Light green body with one yellow band and all markings

in red.

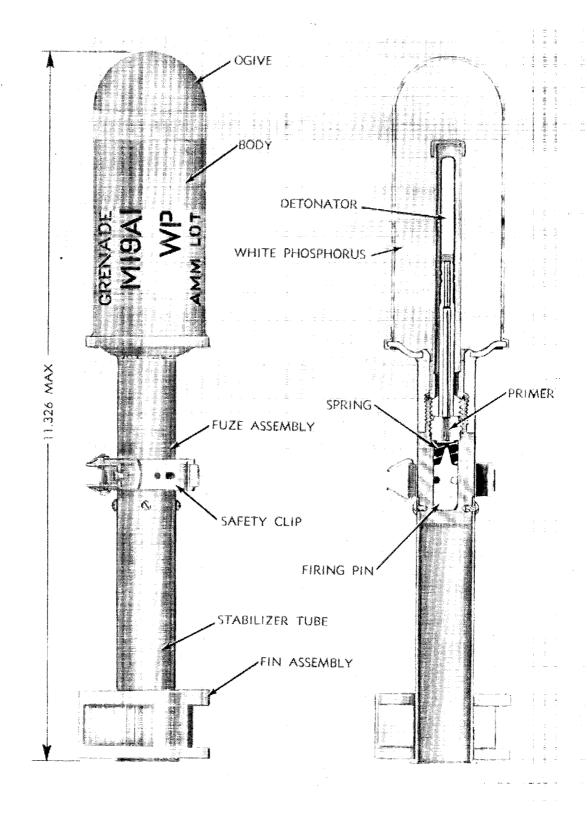
DISPOSAL:

Detonate

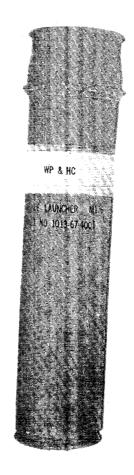
GENERAL INFORMATION:

The M19Al WP Rifle Grenade is used to mark targets and for antipersonnel. It is fired from a rifle and

is a bursting type munition.



GRENADE, RIFLE, SMOKE, WP, M19A1 (New Color Code)



LAUNCHER, GRENADE, SMOKE, M176

AGENT/FILLER:

HC and WP

WEIGHT OF AGENT/FILLER:

HC - 1.2 1bs; WP - 0.94 1bs

DIMENSIONS:

38.10 cm long; 9.37 cm diameter

WEIGHT:

5 1b, 3 oz

FUZE:

XM225 Impulse cartridge

HAZARDS:

High Explosive, Burning, Ejection and Fragmentation

COLOR CODE: NEW:

OD body with one large light green band, one yellow and one brown band and all markings in light red on

the light green band.

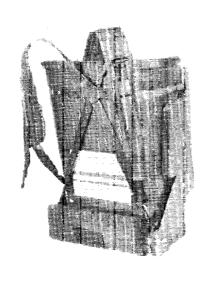
DISPOSAL:

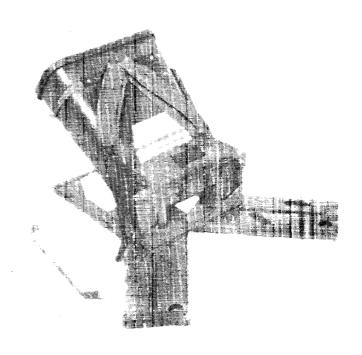
Burn

GENERAL INFORMATION:

The M176 grenade launcher is used to provide smoke screening for tactical vehicle, and has a range of

150 feet.





LAUNCHER, TACTICAL, 35mm, M8

AGENT/FILLER:

WEIGHT OF AGENT/FILLER: 5.5 1bs

DIMENSIONS: 18.9 inches long, 15.0 inches wide, 8.9 inches deep

WEIGHT: 33.5 1bs

FUZE: Electric or Manual

HAZARDS: Agent, Burning and Ejection

COLOR CODE: NEW: OD body with a gray band with one red and one brown

band and all markings in red on the gray band.

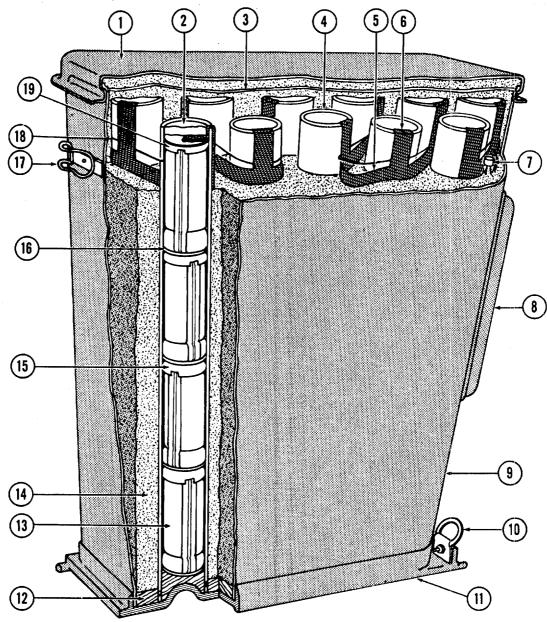
DISPOSAL: Burn

GENERAL INFORMATION: The M8 launcher is a 16-tube launcher which contains

64 E23 sub-munitions, 4 in each tube, which have a

range of 150 yards. The E23 is a burning type munition.

TB 3-1310-255-10



- Top cover
 Foam cap
 Foil vapor barrier
 Paper tube
 Main fuse train
 Fuse strip
 Electrical squib
 Firing well cover
 Plastic case
 Carrying harness attachment ring

- 11 12 13 14 15 16 17 18 19

- Baseplate
 Epoxy resin
 E23 cartridge
 Polyurethane foam
 Plastic separator cap
 Cardboard separator disc
 Trail release catch
 Auxiliary fuse train
 Plastic separator cap, flanged

LAUNCHER, TACTICAL, 35mm, M8

CARTRIDGE, RIOT, E23

AGENT/FILLER:

CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

38 grams

DIMENSIONS:

3-1/2 inches long; 1-1/4 inches diameter

WEIGHT:

70 grams

FUZE:

Pyrotechnic delay 5-6 seconds

HAZARDS:

Burning, Agent

COLOR CODE: NEW:

No markings.

DISPOSAL:

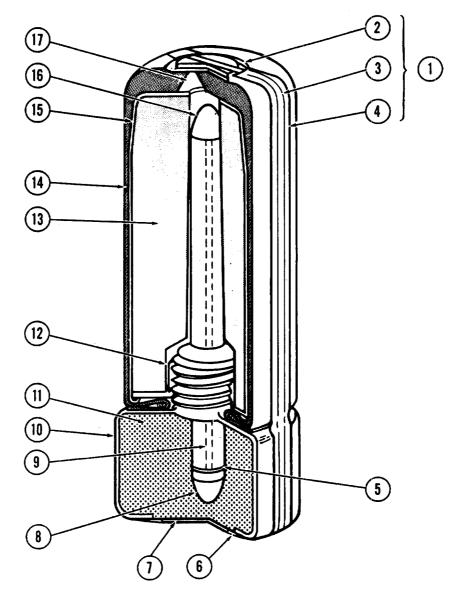
Burn

GENERAL INFORMATION:

The E23 cartridge is used in the M8 launcher, and

is a burning type munition.

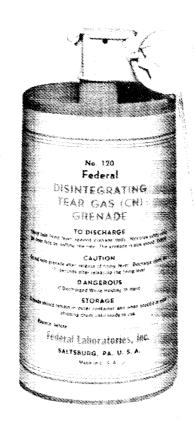
TI



- Fuse train
 Pyrotechnic disc
 Pyrotechnic fuse strip
 Lead-foil tape
 Crimp ring
 Lacquered diaphragm
 Pyrotechnic pad
 First-fire coating
 Time-delay fuse 1 2 3 4 5 6 7 8 9

- Propellant cup
 Black powder
 Threaded disc
 CS pyrotechnic mixture
 Elastomeric diaphragm
 Aluminum canister
 Igniter coating
 Nozzle 10 11 12 13 14 15 16 17

CARTRIDGE, RIOT, CS, E23



FEDERAL DISINTEGRATING GRENADE, MODEL #120

AGENT/FILLER:

CN, CS

WEIGHT OF AGENT/FILLER: CN - 160 grams; CS - 150 grams

DIMENSIONS:

6-1/4 inches high; 2-5/8 inches diameter

WEIGHT:

13 oz

FUZE:

2 second delay

HAZARDS:

Agent and Burning

COLOR CODE:

CN - Red body with a white label and black markings

CS - Blue body with a white label and black markings

DISPOSAL:

Burn or Detonate

GENERAL INFORMATION:

The grenade releases the agent by disintegrating the cardboard body. The top and bottom of the body are

metal.



FEDERAL SPEEDHEAT GRENADE, MODELS #112, 113, 555

AGENT/FILLER:

CN, CS, DM

WEIGHT OF AGENT:

CN - 450 grams; CS - 425 grams; DM - 426 grams

DIMENSIONS:

6-1/4 inches high; 2-5/8 inches diameter

WEIGHT:

CN - 17-1/2 oz; CS - 16-1/2 oz; DM - 15-1/2 oz

FUZE:

1 second delay

HAZARDS:

Agent and Burning

COLOR CODE:

CN - Red body with a white label and black markings.
 DM - Green body with a white label and black markings.
 CS - Blue body with a white label and black markings.

DISPOSAL:

Burn

GENERAL INFORMATION:

The speedheat grenade is a general burning type grenade which will burn for about 25 to 35 seconds.



FEDERAL TRIPLE-CHASER GRENADE, MODELS #115, 116, 515

AGENT/FILLER:

CN, DM, CS

WEIGHT OF AGENT/FILLER: CN - 304 grams, DM - 388 grams, CS - 304 grams

DIMENSIONS:

6-1/4 inches high; 2-5/8 inches diameter

WEIGHT:

CN - 1.4 lbs; DM - 1 lb; CS - 1.2 lbs

FUZE:

2 second delay

HAZARDS:

Agent and Burning

COLOR CODE:

CN - Red body with a white label and black markings. DM - Green body with a white label and black markings. CS - Blue body with a white label and black markings.

DISPOSAL:

Burn

GENERAL INFORMATION:

The triple-chaser is a burning type grenade which will separate into three sections which will bounce along the ground as they burn. Each section will burn for about 25 to 35 seconds.



FEDERAL BLAST DISPERSION GRENADE

AGENT/FILLER:

CN, CS

WEIGHT OF AGENT/FILLER: CN - 146 grams; CS - 140 grams

DIMENSIONS:

6-1/4 inches high; 2-5/8 inches diameter

WEIGHT:

15-1/2 oz

FUZE:

2 second delay

HAZARDS:

Agent

COLOR CODE:

CN - Red body with a white label and black markings. CS - Blue body with a white label and black markings.

DISPOSAL:

Burn

GENERAL INFORMATION:

The blast dispersion grenade bursts giving off a large cloud of agent. The body will stay in one piece, not giving off any fragments, and is fire safe.



FEDERAL SPEEDHEAT SMOKE GRENADE

AGENT/FILLER:

HC smoke mixture

WEIGHT OF AGENT/FILLER: 12 oz

DIMENSIONS:

6 inches high; 2-5/8 inches diameter

WEIGHT:

1 1b, 9 oz

FUZE:

1 second delay

HAZARDS:

Burning

COLOR CODE:

Yellow body with a white label and black markings.

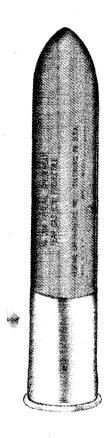
DISPOSAL:

Burn

GENERAL INFORMATION:

The grenade is an HC filled burning type which will

burn for about 2-1/2 minutes.



FEDERAL 1-1/2 INCH CAL, SPEEDHEAT PROJECTILE

AGENT/FILLER:

CN, DM, CS

WEIGHT OF AGENT/FILLER: CN - 179 grams; DM - 164 grams; CS - 169 grams

DIMENSIONS:

8-1/2 inches long; 1-1/2 inches diameter

WEIGHT:

9-1/2 oz

FUZE:

Pyrotechnic delay

HAZARDS:

Agent and Burning

COLOR CODE:

CN - Red body with all markings in black. DM - Green body with all markings in black. CS - Blue body with all markings in black.

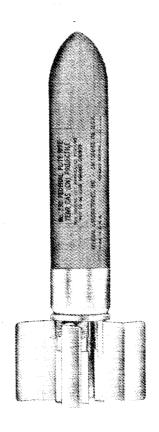
DISPOSAL:

Burn

GENERAL INFORMATION:

The 1-1/2 inch speedheat projectile is used with the 1-1/2 inch gas gun, and is a burning type projectile which will burn for about 25 to 35

seconds.



FEDERAL 1-1/2 INCH CAL, FLITE-RITE PROJECTILE

AGENT/FILLER:

CN, DM, CS

WEIGHT OF AGENT/FILLER: CN - 164 grams, DM - 159 grams, CS - 155 grams

DIMENSIONS:

10-1/2 inches long, 1-1/2 inches diameter

WEIGHT:

15 oz

FUZE:

Pyrotechnic delay

HAZARDS:

Agent and Burning

COLOR CODE:

CN - Red body with all markings in black. DM - Green body with all markings in black. CS - Blue body with all markings in black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The 1-1/2 inch Flite-Rite projectile is used in the 1-1/2 inch gas gun, and is a burning type projectile which will burn for about 25 to 35

seconds.



FEDERAL 1-1/2 INCH CAL, IMPACT FLITE-RITE PROJECTILE

AGENT/FILLER:

CN, CS

WEIGHT OF AGENT/FILLER:

CN - 130 grams; CS - 120 grams

DIMENSIONS:

10-1/2 inches long, 1-1/2 inches diameter

WEIGHT:

1 1b

FUZE:

Impact

HAZARDS:

Agent

COLOR CODE:

CN - Red body with a gold nose and all markings in black. CS - Blue body with gold nose and all markings in black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The 1-1/2 inch impact projectile is a blast dispersion

type which will not give off any fragments, and is used with the 1-1/2 inch gas gun.



FEDERAL 1-1/2 INCH CAL, SHORT RANGE SHELL

AGENT/FILLER:

CN, DM, CS

WEIGHT OF AGENT/FILLER: CN - 135 grams, DM - 150 grams, CS - 125 grams

DIMENSIONS:

8-1/2 inches long, 1-1/2 inches diameter

WEIGHT:

8 oz

FUZE:

None

HAZARDS:

Agent

COLOR CODE:

CN - Aluminum body with a red wad and all markings in

black.

DM - Aluminum body with a green wad and all markings

in black.

CS - Aluminum body with a blue wad and all markings in

black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The 1-1/2 inch short range shell is used in the 1-1/2inch gas gun, and discharges the agent powder out of the muzzle of the gun. It has a range of about 35

feet.



GRENADE, HAND, RIOT (LAKE ERIE) 2 CN

AGENT/FILLER:

CN Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 434 grams

DIMENSIONS:

6.5 inches high; 2-5/8 inches diameter

WEIGHT:

15 oz

FUZE:

1 second delay

HAZARDS:

Agent and Burning

COLOR CODE:

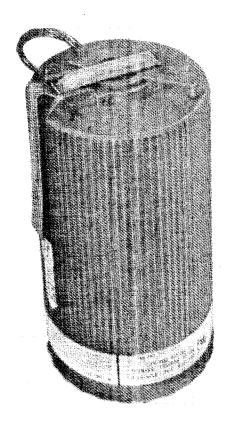
Aluminum body with a white decal and markings in black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The Lake Erie CN grenade is a burning type which will burn for about 25 to 35 seconds.



AAI CORPORATION, MPG-MULTI-PURPOSE, GRENADE

AGENT/FILLER:

WEIGHT OF AGENT/FILLER: CN - 140 grams, CS - 120 grams, CN/DYE - 140 grams,

TALC - 140 grams

DIMENSIONS: 6-1/2 inches high; 3-1/4 inches diameter

WEIGHT: About 1-1/2 lbs

FUZE: 2 to 5 second delay

HAZARDS: Agent

COLOR CODE: CN - Red body with white label, black markings and red

base cap.

CN/DYE - Red body with white label, black markings,

colored dot on the label for the color of dye,

and a red base cap.

CS - Red body with white label, all markings in black,

and a blue base cap.

TALC/INERT - Red body with white label, black markings,

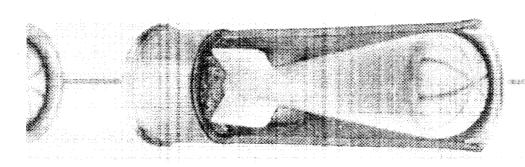
and a white base cap.

DISPOSAL: Burn

GENERAL INFORMATION: The AAI MPG grenade is filled with a powdered agent

which is forced out the end of the body by a gas

cartridge so that it will not cause a fire.



AAI CORPORATION, 12 GA, LIQUID BARRICADE PENETRATING CARTRIDGE (FERRET) SGA-100

AGENT/FILLER:

Liquid CS

WEIGHT OF AGENT/FILLER: 3 cc

DIMENSIONS:

2-1/2 inches long; 12 Ga shot gun shell

WEIGHT:

About 3 oz

FUZE:

None

HAZARDS:

Agent

COLOR CODE:

Red body with all markings in black.

DISPOSAL:

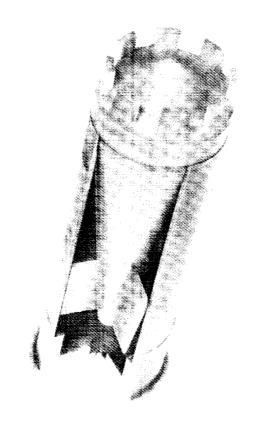
Burn

GENERAL INFORMATION:

The 12 Ga Ferret projectile is filled with 3 cc of liquid CS and is used in any 12 Ga shot gun. The projectile will penetrate the following:

Automobile windshield at 100 feet

3/4 inch plywood at 50 feet storm window at 300 feet hollow core door at 300 feet 1/4 inch plate glass at 300 feet



AAI CORPORATION, 1-1/2 INCH CAL, (FERRET) SGA-300

AGENT/FILLER:

Liquid CS

WEIGHT OF AGENT/FILLER: 28 cc

DIMENSIONS:

8 inches long; 1-1/2 inches diameter

WEIGHT:

About 1 1b

FUZE:

None

HAZARDS:

Agent

COLOR CODE:

Aluminum body with a red band and all markings in black.

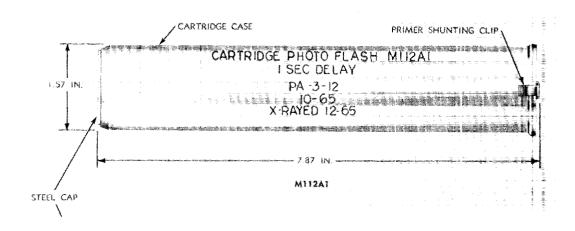
DISPOSAL:

Burn

GENERAL INFORMATION:

The 1-1/2 inch Ferret is used with the 1-1/2 inch gas gun and contains 28 cc of liquid CS. It has the same

penetration as the 12 Ga Ferret projectile.



CARTRIDGE, PHOTOFLASH, M112A1, 1-2-4 SECOND DELAY

AGENT/FILLER:

Photoflash powder

WEIGHT OF AGENT/FILLER:

7.0 oz

DIMENSIONS:

7.73 inches long; 1.57 inches diameter

WEIGHT:

1 1b

FUZE:

Pyrotechnic delay

HAZARDS:

Photoflash Powder, Light, Ejection and Electrical

COLOR CODE:

Aluminum body with all markings in black.

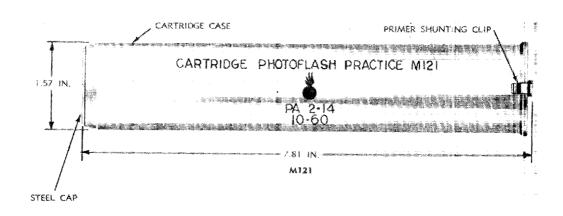
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for night time recon missions and is a bursting type projectile which has a candle power of about 100 million candle power. Photoflash

powder detonates; it will not burn.



CARTRIDGE, PHOTOFLASH, PRACTICE, M121

AGENT/FILLER:

Wood plug with steel bar

WEIGHT OF AGENT/FILLER:

7.0 oz

DIMENSIONS:

7.81 inches long; 1.51 inches diameter

WEIGHT:

1 1b

FUZE:

Pyrotechnic delay

HAZARDS:

Ejection and Electrical

COLOR CODE:

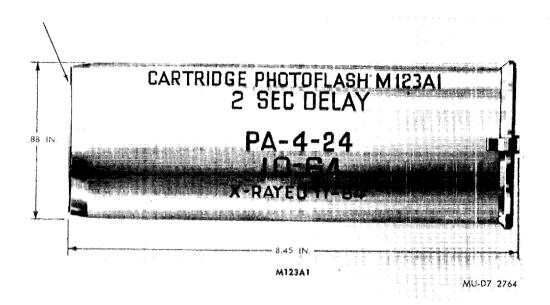
Aluminum body with all markings in black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The cartridge is used for practice firing.



CARTRIDGE, PHOTOFLASH, M123A1, 2-4-6 SECOND DELAY

AGENT/FILLER:

Photoflash powder

WEIGHT OF AGENT/FILLER:

1.75 1bs

DIMENSIONS:

8.45 inches long; 2.88 inches diameter

WEIGHT:

4.3 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Photoflash Powder, Light, Ejection and Electrical

COLOR CODE:

Aluminum body with all markings in black.

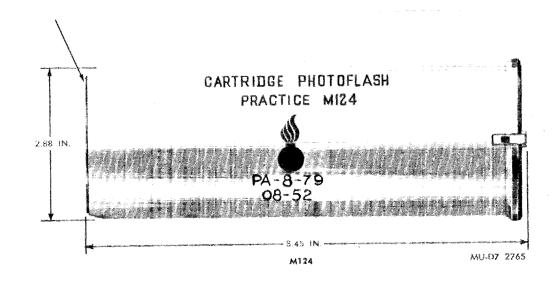
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for night time recon missions and is a bursting type projectile which has a candle power of about 400 million candle power. Photoflash

powder detonates; it will not burn.



CARTRIDGE, PHOTOFLASH, PRACTICE, M124

AGENT/FILLER: Metal of

Metal can inert loaded

WEIGHT OF AGENT/FILLER: 1.12 1bs

The state of the s

DIMENSIONS: 8.45 inches long; 2.88 inches diameter

WEIGHT: 4.3 1bs

FUZE: None

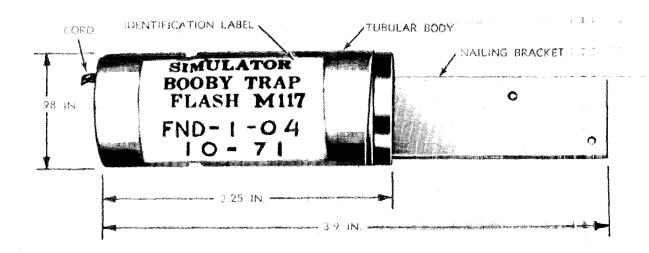
HAZARDS: Ejection and Electrical

COLOR CODE: Aluminum body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The cartridge is used for practice firing and does

not contain any photoflash powder.



SIMULATOR, BOOBY TRAP, FLASH, M117

AGENT/FILLER:

Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

.09 oz

DIMENSIONS:

3.9 inches long; .98 inches diameter

WEIGHT:

0.14 1bs

FUZE:

Non-delay pull type

HAZARDS:

Photoflash Powder

COLOR CODE:

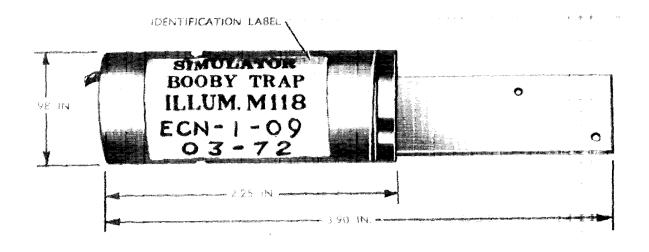
White paper body with all markings in black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The simulator is used as a safe booby trap during maneuvers and troop training, and is a bursting type



SIMULATOR, BOOBY TRAP, ILLUMINATING, M118

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER: .18 oz

DIMENSIONS:

3.90 inches long; .98 inches diameter

WEIGHT:

0.14 1bs

FUZE:

Non-delay pull type

HAZARDS:

Burning

COLOR CODE:

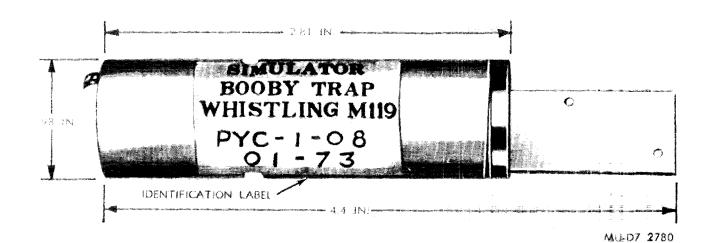
White paper body with all markings in black.

DISPOSAL:

Burn

GENERAL INFORMATION:

The simulator is used as a safe booby trap during maneuvers and troop training, and is a burning type



SIMULATOR, BOOBY TRAP, WHISTLING, M119

AGENT/FILLER: Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: .12 oz

DIMENSIONS: 4.4 inches long; .98 inches diameter

WEIGHT: 0.15 lbs

FUZE: Non-delay pull type

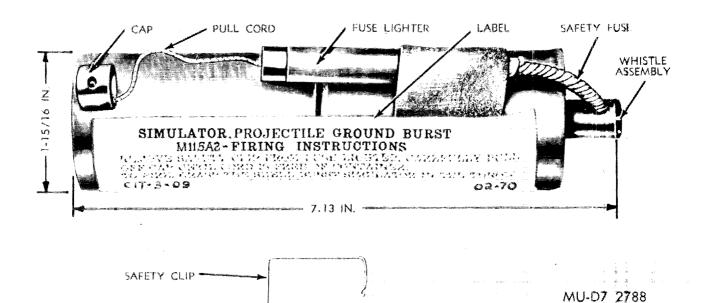
HAZARDS: Burning

COLOR CODE: White paper body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The simulator is used as a safe booby trap during

maneuvers and troop training, and is a burning type



SIMULATOR, PROJECTILE, GROUND BURST, M115A2

AGENT/FILLER:

Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

DIMENSIONS:

7.13 inches long; 1-15/16 inches diameter

WEIGHT:

0.30 lbs

FUZE:

Time delay 6-10 seconds

HAZARDS:

Photoflash Powder

COLOR CODE: OLD:

Gray body with white label and all markings in

black.

NEW:

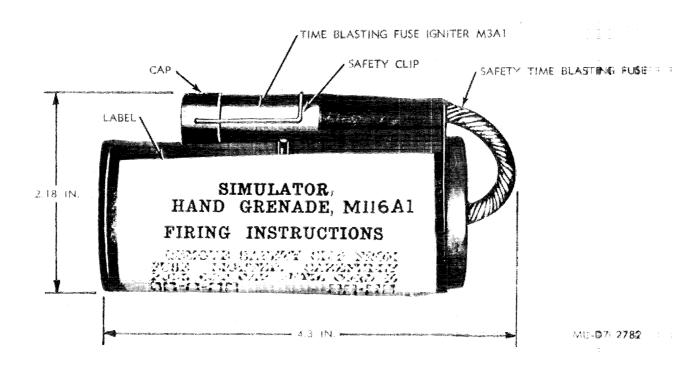
White body with all markings in black.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The simulator is used to simulate a projectile exploding on the ground, and is a bursting type



SIMULATOR, HAND GRENADE, M116A1

AGENT/FILLER:

Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 1.3 oz

DIMENSIONS:

4.27 inches long; 2.18 inches diameter

WEIGHT:

0.25 1bs

FUZE:

Time delay 5-10 seconds

HAZARDS:

Photoflash Powder

COLOR CODE: OLD: Gray body with black markings on white label.

NEW:

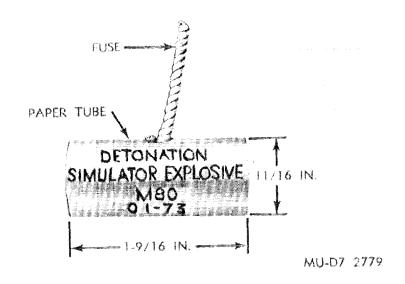
White body with all markings in black.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The simulator is used to simulate a hand grenade during troop maneuvers, and is a bursting type



SIMULATOR, EXPLOSIVE DETONATION, M80

AGENT/FILLER:

Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

3 grams

DIMENSIONS:

1-9/16 inches long; 1-1/16 inches diameter

WEIGHT:

0.013 1bs

FUZE:

Time delay, 4-7 seconds

HAZARDS:

Photoflash Powder

COLOR CODE:

White paper body with all markings in black.

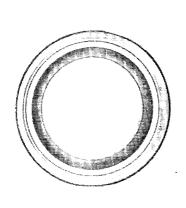
DISPOSAL:

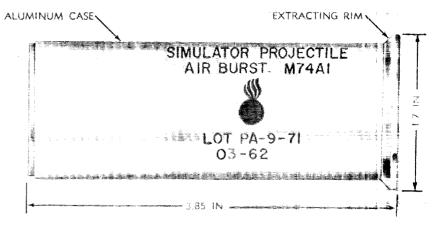
Burn

GENERAL INFORMATION:

The M80 is used like a firecracker, and is used to simulate any type of explosive device in a

training program.





MU-D7 2784

SIMULATOR, PROJECTILE, AIR BURST, M74A1

AGENT/FILLER:

Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

2.08 oz

DIMENSIONS:

3.85 inches long; 1.7 inches diameter

WEIGHT:

.34 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Photoflash Powder, Ejection

COLOR CODE:

Aluminum body with all markings in black.

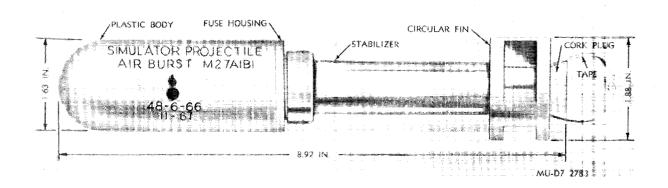
DISPOSAL:

Detonate

GENERAL INFORMATION:

The simulator is fired from an M8 pyrotechnic pistol and is used to simulate a projectile

bursting in the air.



SIMULATOR, PROJECTILE, AIR BURST, M27A1B1

AGENT/FILLER: Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 2.2 oz

DIMENSIONS: 8.92 inches long; 1.88 inches diameter

WEIGHT: .58 lbs

FUZE: Pyrotechnic delay

HAZARDS: Photoflash Powder

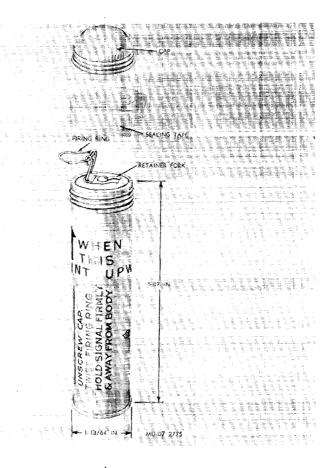
COLOR CODE: Aluminum body with all markings in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The simulator is fired from a rifle using the

grenade projection device, and is used to simulate

a projectile bursting in the air.



SIGNAL, ILLUMINATION, MARINE, TWO STAR RED, AN-M75

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: .42 oz

DIMENSIONS: 5.07 inches long; 1-13/64 inches diameter

WEIGHT: 0.34 lbs

FUZE: Pull release

HAZARDS: Burning and Ejection

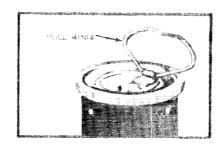
COLOR CODE: Red body with black markings.

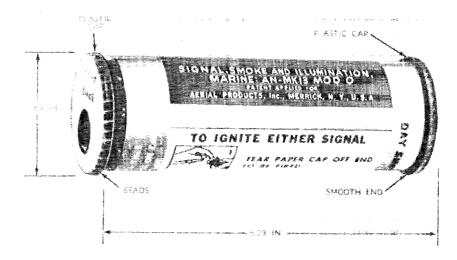
DISPOSAL: Burn

GENERAL INFORMATION: The signal is hand fired and will project the two

red signals into the air about 175 feet where they can be seen up to 3 miles on a clear day and 15

miles at night.





SIGNAL, SMOKE AND ILLUMINATION, MARINE, AN-MK13 MOD-0

AGENT/FILLER: Smoke and Illuminating Mixture

WEIGHT OF AGENT/FILLER: Smoke .60 oz; Flare .25 oz

DIMENSIONS: 5.23 inches long; 1.63 inches diameter

WEIGHT: .4 1bs

FUZE: Pull friction

HAZARDS: Burning

COLOR CODE: Gray body with all markings on decal.

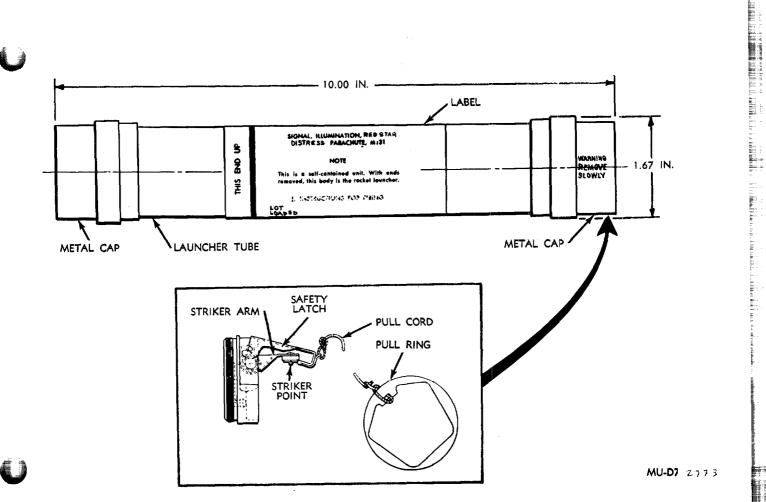
DISPOSAL: Burn

GENERAL INFORMATION: The signal is used for day or night use and has

a red flare on one end and an orange smoke on

the other. Each part of the signal will burn for

about 18 seconds.



SIGNAL, ILLUMINATION, RED STAR, DISTRESS, PARACHUTE, M131

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

1.62 oz

DIMENSIONS:

10.0 inches long; 1.67 inches diameter

WEIGHT:

1.21 lbs

FUZE:

Pull release

HAZARDS:

Burning and Ejection

COLOR CODE:

Aluminum body with white label, black markings,

and a brown band.

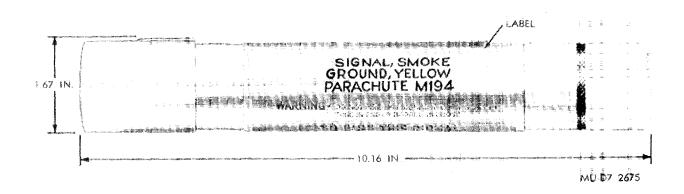
DISPOSAL:

Burn

GENERAL INFORMATION:

The signal is hand fired and can be seen for up

to 35 miles.



SIGNAL, SMOKE, GROUND, PARACHUTE

AGENT/FILLER:

Smoke Mixture

WEIGHT OF AGENT/FILLER:

70 to 100 grams, depending on color

DIMENSIONS:

10.16 inches long; 1.67 inches diameter

WEIGHT:

1.3 lbs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE:

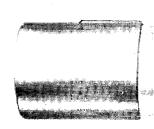
Aluminum body with white label, black markings, and end wad painted the color of the signal.

DISPOSAL:

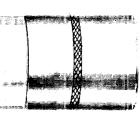
Burn

GENERAL INFORMATION:

The signal is a hand fired signal which comes in red, green and yellow smoke, and is used for signaling.



SIGNALILLUMINATION GROUND WHITE STAR PARACHUTE MI27AI



MU-D7 2772 1 =

SIGNAL, ILLUMINATION, GROUND, STAR PARACHUTE

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER: 1.62 oz to 3.5 oz, depending on color

DIMENSIONS:

10.16 inches long; 1.64 inches diameter

LABEL

WEIGHT:

1.3 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE:

Aluminum body with white label and black markings; end cork seal is painted the color of the signal.

DISPOSAL:

Burn

GENERAL INFORMATION:

The signal is hand fired and is used for signaling and illuminating. The signal comes in red, green,

yellow, and violet.



SIGNAL, ILLUMINATION, GROUND, STAR CLUSTER M125

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

2.50 oz

DIMENSIONS:

10.16 inches long; 1.64 inches diameter

WEIGHT:

1.3 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE:

Aluminum body with white label and black markings; end cork seal is painted the color of the signal.

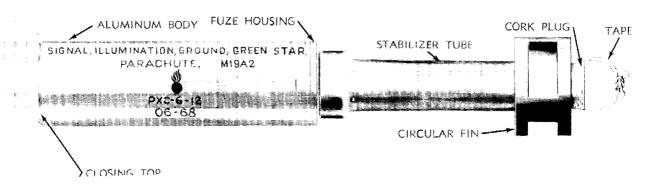
DISPOSAL:

Burn

GENERAL INFORMATION:

The signal is hand fired and is used for signaling and illuminating; the signal comes in red, green,

yellow, and violet.



SIGNAL, ILLUMINATION, GROUND, STAR CLUSTER M17,M18,M19,M20,M21 Series

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

2.55 oz to 5.30 oz, depending on model

DIMENSIONS:

10.40 inches long; 1.88 inches diameter

WEIGHT:

1.02 lbs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE:

Aluminum body with all markings in black and

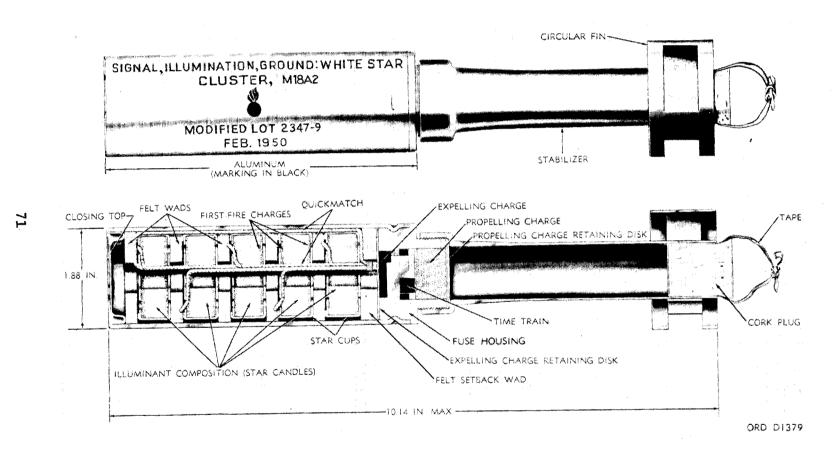
with the end caps painted the color of the signal.

DISPOSAL:

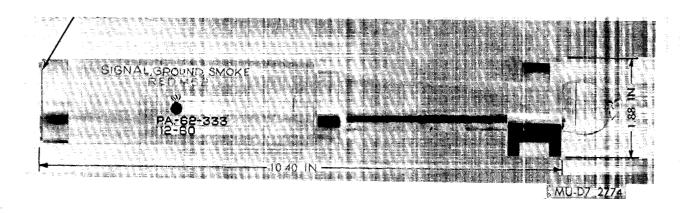
Burn

GENERAL INFORMATION:

The signal is used for signaling and illuminating; the colors are red, green, white, and amber(yellow).



SIGNAL, ILLUMINATION, GROUND, WHITE STAR CLUSTER, M18A2



SIGNAL, GROUND, SMOKE M62R, M64Y, M65G, M66V

AGENT/FILLER:

Smoke Mixture

WEIGHT OF AGENT/FILLER:

4.26 oz

DIMENSIONS:

10.40 inches long; 1.88 inches diameter

WEIGHT:

0.91 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE:

Aluminum body with black markings; end caps

painted the color of the signal.

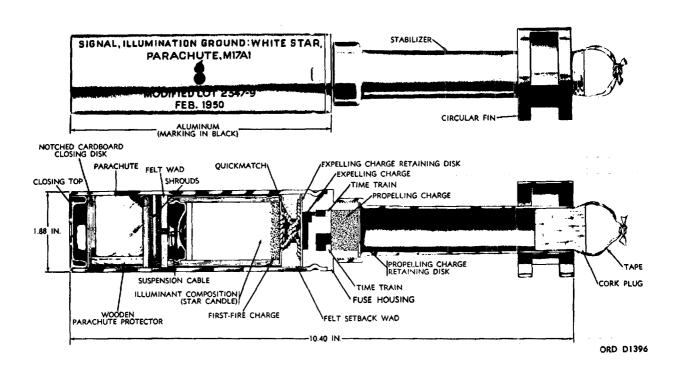
DISPOSAL:

Burn

GENERAL INFORMATION:

The signal is used for signaling, and comes in

red, green, yellow, and violet.



SIGNAL, ILLUMINATION, GROUND, STAR PARACHUTE

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

2.55 oz

DIMENSIONS:

10.40 inches long; 1.88 inches diameter

WEIGHT:

1.02 lbs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE:

Aluminum body with black markings; color of candle

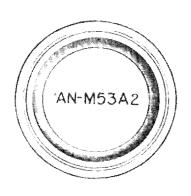
painted on the end cap.

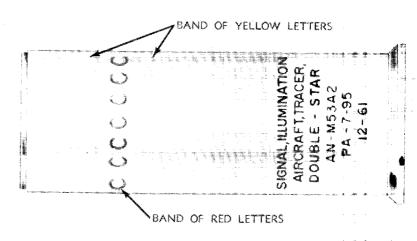
DISPOSAL:

Burn

GENERAL INFORMATION:

The signals are used for illuminating and signaling. The colors are red, white, green and amber (yellow).





MU-D7 2769

SIGNAL, ILLUMINATION, AIRCRAFT TRACER DOUBLE STAR

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

1.08 oz to 1.55, depending on color of stars

DIMENSIONS:

3.85 inches long; 1.57 inches diameter

WEIGHT:

0.43 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE: NEW:

Aluminum body with black markings and bands of

colored letters.

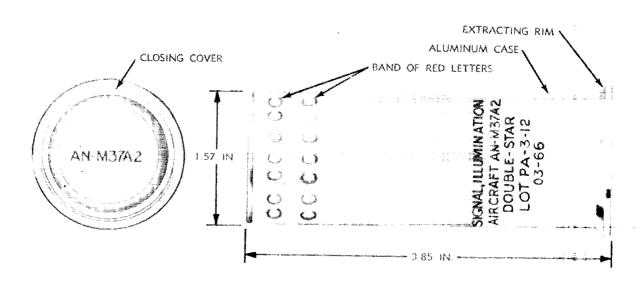
DISPOSAL:

Burn

GENERAL INFORMATION:

The signal is fired from an AN-M8 pyrotechnic pistol and is used to signal from air-to-air, air-to-surface, surface-to-air or surface-to-

surface.



SIGNAL, ILLUMINATION, AIRCRAFT, DOUBLE STAR

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

1.66 oz to 4.3 oz, depending on color of star

DIMENSIONS;

3.85 inches long; 1.57 inches diameter

WEIGHT:

0.43 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE: NEW:

Aluminum body with black markings and bands of

colored letters.

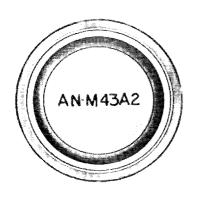
DISPOSAL:

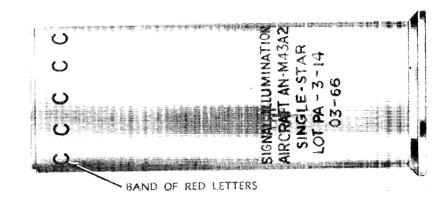
Burn

GENERAL INFORMATION:

The signal is fired from an AN-M8 pyrotechnic pistol and is used to signal from air-to-air, air to surface, surface-to-air, or surface-to-

surface.





SIGNAL, ILLUMINATION, AIRCRAFT, SINGLE STAR

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER:

1.99 oz to 2.35 oz, depending on color

DIMENSIONS:

3.85 inches long; 1.57 inches diameter

WEIGHT:

0.43 1bs

FUZE:

Pyrotechnic delay

HAZARDS:

Burning and Ejection

COLOR CODE: NEW:

Aluminum body with black markings and a band of

colored letters.

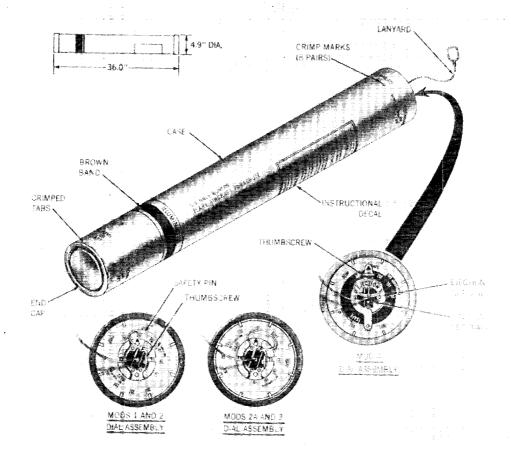
DISPOSAL:

Burn

GENERAL INFORMATION:

The signal is fired from an AN-M8 pyrotechnic pistol and is used to signal from air-to-air, air-to-surface, surface-to-air, surface-to-

surface.



FLARE, AIRCRAFT, PARACHUTE, MK24, MODS

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 15 to 18 1bs

DIMENSIONS: 36.0 inches long; 4.9 inches diameter

WEIGHT: 26 1bs

FUZE: Time delay

HAZARDS: Burning, Ejection, and Light

COLOR CODE: Aluminum body with white decal, black markings,

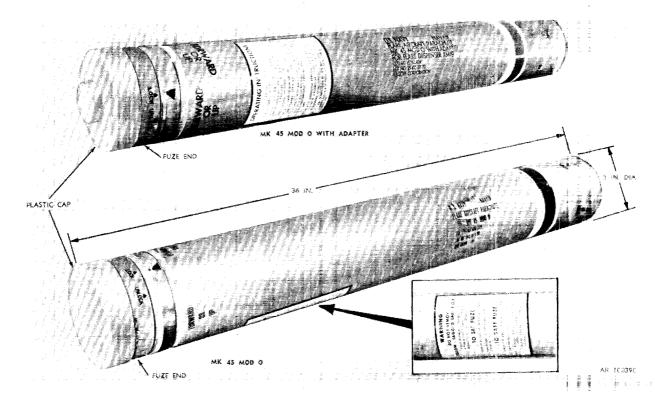
and a brown band.

DISPOSAL: Burn

GENERAL INFORMATION: The MK24 aircraft parachute flare is used for

illumination of the target area at night, and will burn for about 2-1/2 to 3 minutes at about

2 million candle power.



FLARE, AIRCRAFT PARACHUTE, MK45, MODS

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 17.6 1bs

DIMENSIONS: 36.0 inches long; 4.9 inches diameter

WEIGHT: 28 lbs

FUZE: Time and pull release striker

HAZARDS: Burning, Ejection, and Light

COLOR CODE: Aluminum body with white decal, black markings,

and a white decal with a brown band.

DISPOSAL: Burn

GENERAL INFORMATION: The MK45 parachute flare is used at night for

illumination of the target area. It has a candle power of 2 million and will burn for about 2-1/2 to 3 minutes. At about 3 minutes the explosive bolt will fire and release one of the cables.

WARNING: Do not attempt to remove parachute.

FLARE, SURFACE TRIP, M49

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: .07 1b

DIMENSIONS: 6-3/4 inches high; 2-1/4 inches diameter

WEIGHT: .75 1b

FUZE: Non-delay

HAZARDS: Burning

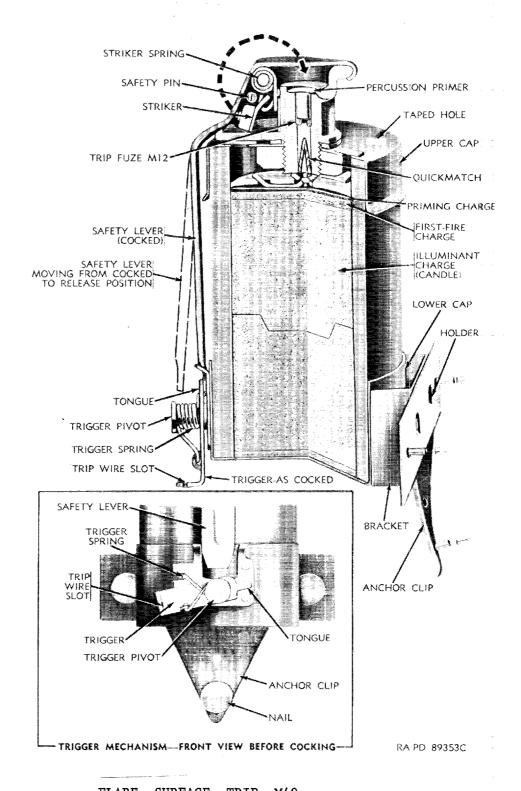
COLOR CODE: OD body with all markings in black.

DISPOSAL: Burn

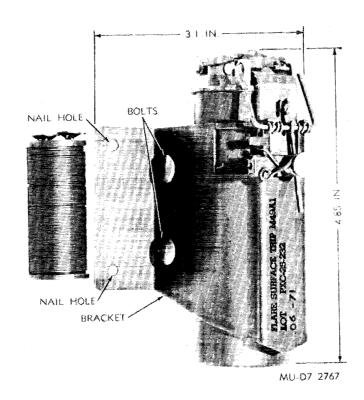
GENERAL INFORMATION: The flare is used to provide light around

infiltrating troops and to give warning.

The munition is a burning type.



FLARE, SURFACE, TRIP, M49



FLARE, SURFACE, TRIP, M49A1

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: .70 1bs

DIMENSIONS: 4.85 inches high; 3.1 inches diameter

WEIGHT: 0.75 1bs

FUZE: Non-delay

HAZARDS: Burning

COLOR CODE: NEW: OD body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The M49 flare is used to provide light around

infiltrating troops and to give warning. The munition is a burning type, and has an ejection hazard from the fuze when it is functioned.



SMOKEPOT, 10-Lb, M1

AGENT/FILLER: HC

WEIGHT OF AGENT/FILLER: 10.0 1bs

DIMENSIONS: 9 inches high; 5-1/2 inches diameter

WEIGHT: 11.0 1bs

FUZE: Igniting

HAZARDS: Burning and Agent

COLOR CODE: OLD: Gray body with one yellow band and all markings

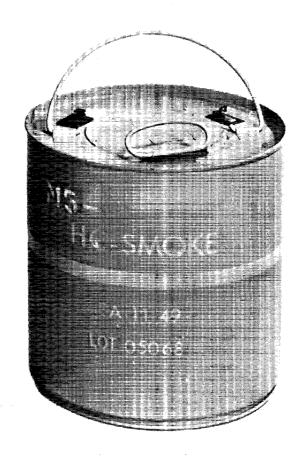
in yellow.

NEW: Light green body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The Ml smokepot is used for screening and will

burn for about 8 minutes.



SMOKEPOT, 30-Lb, ABC-M5

AGENT/FILLER: HC

WEIGHT OF AGENT/FILLER: 30 1bs

DIMENSIONS: 9-1/2 inches high; 8-1/2 inches diameter

WEIGHT: 31 1bs

FUZE: Matchhead and electric squibs

HAZARDS: Burning and Agent

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW: Light green body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The ABC-M5 smokepot is used for screening and

will burn for about 22 minutes.



SMOKEPOT, FLOATING, M4A2

AGENT/FILLER: HC

WEIGHT OF AGENT/FILLER: 27.5 1bs

DIMENSIONS: 13 inches high; 12 inches diameter

WEIGHT: 38 1bs

FUZE: M207A1 Igniting

HAZARDS: Burning and Agent

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW: Light green body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The M4A2 smokepot is used for screening and will

burn for about 15 minutes; can also be electric

fired.



SMOKEPOT, FLOATING, AN-M7/AN-M7A1

AGENT/FILLER: SGF-2

WEIGHT OF AGENT/FILLER: 13 1bs

DIMENSIONS: 13 inches high; 12 inches diameter

WEIGHT: 39 1bs

FUZE: M208 Igniting

HAZARDS: Burning

COLOR CODE: OLD: Gray body with one yellow band and all markings

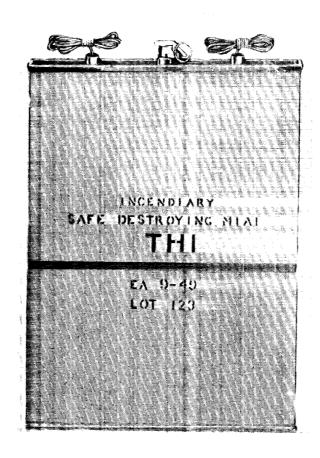
in yellow.

NEW: Light green body with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The AN-M7/AN-M7A1 smokepot is used to provide

screening smoke and will burn for about 13 minutes.



CRYPTOGRAPHIC EQUIPMENT DESTROYER, INCENDIARY, M1A1

AGENT/FILLER:

TH-1

WEIGHT OF AGENT/FILLER:

28 1bs

DIMENSIONS:

21 inches long; 15 inches wide; 1-1/4 inches deep

WEIGHT:

34.0 lbs

FUZE:

M201A1 and two electric squibs

HAZARDS:

Burning

COLOR CODE: OLD:

Gray body with one purple band and all markings

in purple.

NEW:

Red body with all markings in black.

GENERAL INFORMATION:

The M1Al destroyer is designed for the destruction of cryptographic equipment. May explode when ignited

after two or more years of arctic storage.

CRYPTOGRAPHIC EQUIPMENT DESTROYER, INCENDIARY, M1A2

AGENT/FILLER:

TH-1 or TH-4

WEIGHT OF AGENT/FILLER:

28 lbs

DIMENSIONS:

21 inches long; 15 inches wide; 1-1/4 inches deep

WEIGHT:

34.0 1bs

FUZE:

M201A1 and two electric squibs

HAZARDS:

Burning

COLOR CODE: OLD:

Gray body with one purple band and all markings

in purple.

NEW:

Red body with all markings in black.

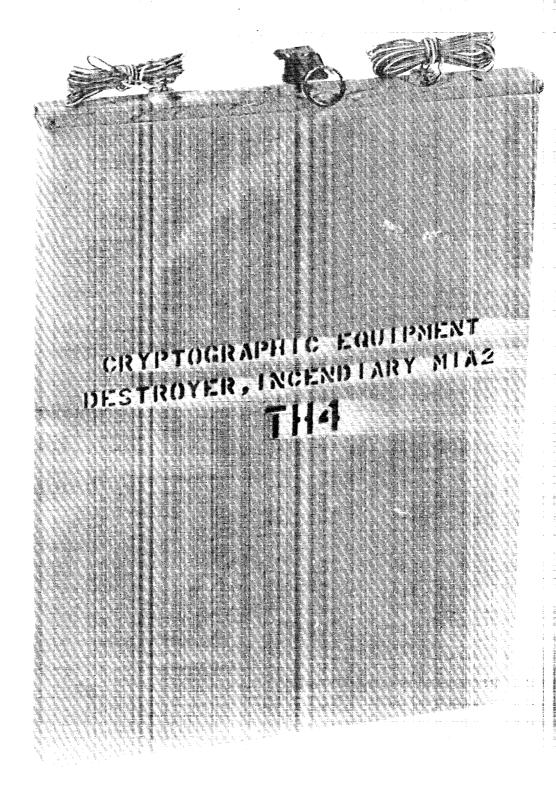
DISPOSAL:

Burn

GENERAL INFORMATION:

The M1A2 destroyer is used to destroy cryptographic equipment. May explode when ignited after

two or more years of arctic storage.



CRYPTOGRAPHIC EQUIPMENT DESTROYER, INCENDIARY, M1A2



CRYPTOGRAPHIC EQUIPMENT DESTROYER, INCENDIARY, M2A1

AGENT/FILLER:

TH-1 or TH-4

WEIGHT OF AGENT/FILLER:

8.50 lbs

DIMENSIONS:

16 inches long; 8-1/2 inches wide; 1 inch deep

WEIGHT:

11.50 1bs

FUZE:

M201Al and one electric squib

HAZARDS:

Burning

COLOR CODE: OLD:

Gray body with one purple band and all markings

in purple.

NEW:

Red body with all markings in black.

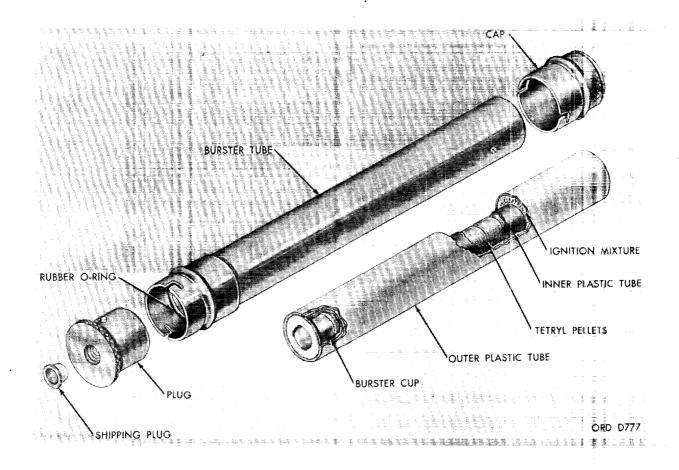
DISPOSAL:

Burn

GENERAL INFORMATION:

The M2Al destroyer is used to destroy cryptographic equipment. May explode when ignited after

two or more years of arctic storage.



BURSTER, INCENDIARY, M4

AGENT/FILLER: HE and Pyrotechnic Incendiary Mixture

WEIGHT OF AGENT/FILLER: 0.26 1bs

DIMENSIONS: 12 inches long; 1-3/4 inches diameter

WEIGHT: 2.25 1bs

FUZE: Blasting cap electric or nonelectric and AP

firing device.

HAZARDS: High Explosive, Burning, and Fragmentation

COLOR CODE: NEW: Red body with one yellow band and all markings

in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The M4 incendiary burster is used in cans 5 gallons

and over which contain a flammable type mixture to

start fires.



DOCUMENT DESTROYER, EMERGENCY, INCENDIARY, M3

AGENT/FILLER:

Incendiary Mixture

WEIGHT OF AGENT/FILLER: 95.0 1bs

DIMENSIONS:

19-3/4 inches high; 15-1/2 inches diameter

WEIGHT:

117.0 lbs

FUZE:

M25 Igniter, 2 each

HAZARDS:

Burning

COLOR CODE: OLD:

Gray body with one purple band and all markings

in purple.

NEW:

Red body with all markings in black.

DISPOSAL:

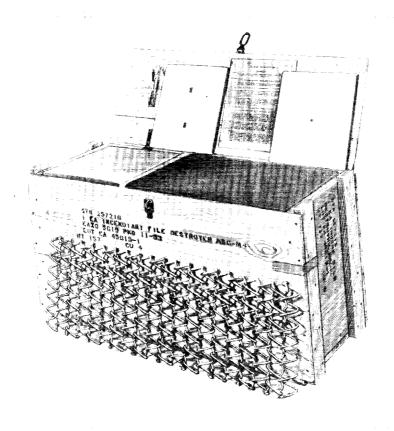
Burn

GENERAL INFORMATION:

The M3 destroyer is used for emergency destruction

of up to 70 lbs of paper and will burn for about

20 minutes.



FILE DESTROYER, INCENDIARY, ABC-M4

AGENT/FILLER: Incendiary Mixture

WEIGHT OF AGENT/FILLER: 72 1bs

DIMENSIONS: 11.5 inches wide; 23.0 inches high; 26.0 inches long

WEIGHT: 160 1bs

FUZE: Igniter

HAZARDS: Burning

COLOR CODE: OLD: Gray band with one purple band over the gray, with

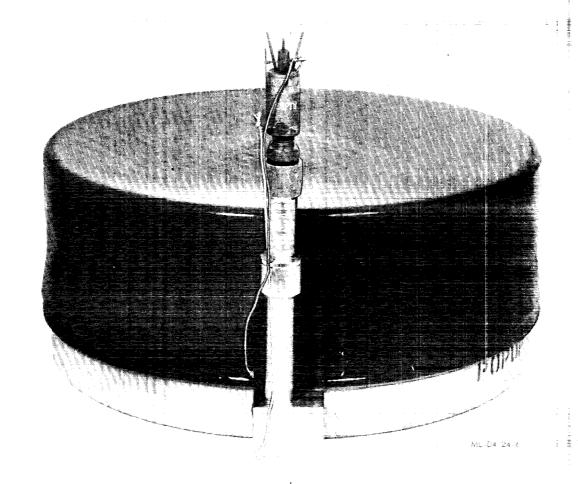
all markings in purple.

NEW: One red band with all markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The ABC-M4 incendiary destroyer is used to destroy

classified papers in three or four drawer filing cabinets; up to 45 lbs of paper can be destroyed.



MINE, ANTIPERSONNEL, POP-UP, XM54

AGENT/FILLER: PWP

WEIGHT OF AGENT/FILLER: 15.0 1bs

DIMENSIONS: 5.0 inches high; 13.0 inches diameter

WEIGHT: 30.0 1bs

FUZE: M605

HAZARDS: Ejection, High Explosive and Burning

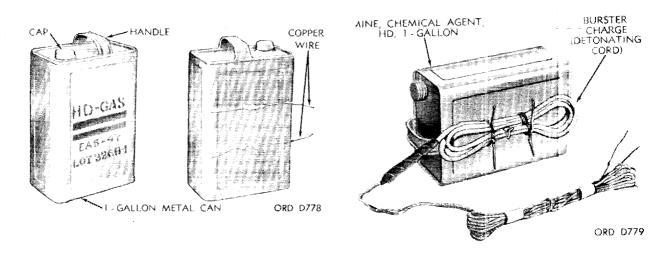
COLOR CODE: NEW: Light green body with one yellow band and all

markings in red.

DISPOSAL: Detonate

GENERAL INFORMATION: The XM54 Mine is a bursting mine which is ejected

10 feet into the air where it will detonate.



MINE, CHEMICAL, 1-GALLON

AGENT/FILLER: HD or MR - Mustard Simulated

WEIGHT OF AGENT: 9.9 1bs

DIMENSIONS: 10-9/16 inches high; 6-9/16 inches wide;

4-1/8 inches deep

WEIGHT: 11.0 lbs

FUZE: Electric or non-electric w/det cord

HAZARDS: Agent and High Explosive (with det cord attached)

COLOR CODE: OLD: Gray body with two green bands and all markings

in green.

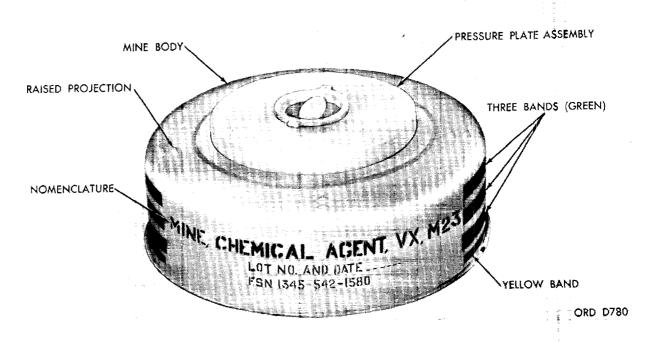
NEW: Same.

DISPOSAL: Vent and Neutralize

GENERAL INFORMATION: The mine is used to disperse HD or MR in a given

> area, and uses about 4 feet of det cord as a burster. The mine can is issued empty with all

markings and is filled in the field.



MINE, CHEMICAL, M23

AGENT/FILLER: VX

WEIGHT OF AGENT/FILLER: 2 gallons, 10-1/2 lbs

DIMENSIONS: 5.0 inches high; 13.0 inches diameter

WEIGHT: 22-3/4 1bs

FUZE: Pressure, pressure-release, pull-release

HAZARDS: Agent and High Explosive

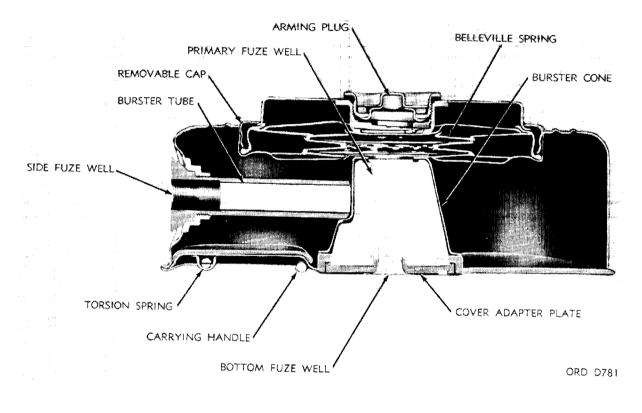
COLOR CODE: NEW: Gray body with three green bands and one yellow

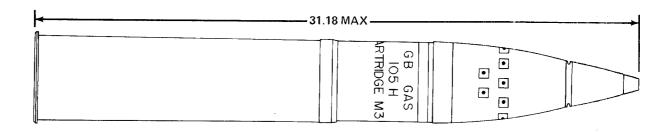
band, with all markings in green.

DISPOSAL: Vent and Neutralize

GENERAL INFORMATION: The M23 mine is filled with 2 gallons of agent

and the explosive burster at the time of manufacture.





AR199739

CARTRIDGE, 105mm, GAS, M360

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER:

1.63 lbs

DIMENSIONS:

31.18 inches long; 105mm diameter

WEIGHT:

43.86 1bs

FUZE:

Impact

HAZARDS:

Agent and High Explosive, Fragmentation

COLOR CODE: OLD:

Gray body with one green band and all markings

in green.

NEW:

Gray body with three green bands and one yellow

band with all markings in green.

DISPOSAL:

Neutralize

GENERAL INFORMATION:

The 105mm GB gas projectile is used to contaminate

an area, and is a bursting type projectile.

CARTRIDGE, 105mm, GAS, M60

AGENT/FILLER: H, HD

WEIGHT OF AGENT/FILLER: H - 3.17 lbs; HD - 2.97 lbs

DIMENSIONS: 31.07 inches long; 105mm diameter

WEIGHT: 42.92 1bs

FUZE: Impact

HAZARDS: Agent and High Explosive, Fragmentation

COLOR CODE: OLD: Gray body with two green bands and all markings

in green.

NEW: Gray body with two green bands and one yellow band

1 4 5

with all markings in green.

DISPOSAL: WARTIME: Vent and Burn

PEACETIME: Vent and Neutralize

GENERAL INFORMATION: The 105mm, M60 gas projectile is used to contaminate

an area, and is a bursting type projectile.

PROJECTILE, 155mm, GAS, M104

AGENT/FILLER:

HD

WEIGHT OF AGENT/FILLER:

11.70 lbs

DIMENSIONS:

26.78 inches long; 155mm diameter

WEIGHT:

94.60 lbs

FUZE:

PD

HAZARDS:

High Explosive and Agent, Fragmentation

COLOR CODE: OLD:

Gray body with two green bands and all markings

in green.

NEW:

Gray body with two green bands and one yellow

band and all markings in green.

DISPOSAL: WARTIME:

Vent and Burn

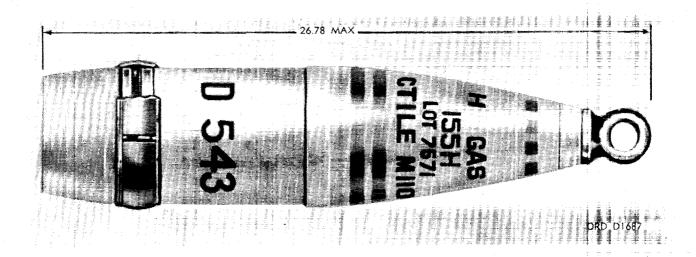
PEACETIME:

Vent and Neutralize

GENERAL INFORMATION:

The M104 155mm gas projectile is filled with blister

agent HD only.



PROJECTILE, 155mm, GAS, M110

AGENT/FILLER: H or HD

WEIGHT OF AGENT/FILLER: H - 11.7 lbs; HD - 9.7 lbs

DIMENSIONS: 26.78 inches long; 155mm diameter

WEIGHT: 98.49 1bs

FUZE: PD

HAZARDS: High Explosive and Agent, Fragmentation

COLOR CODE: OLD: Gray body with two green bands and all markings

in green.

NEW: Gray body with two green bands and one yellow band

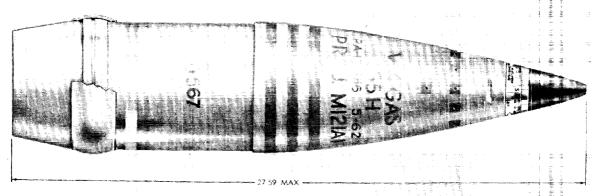
with all markings in green.

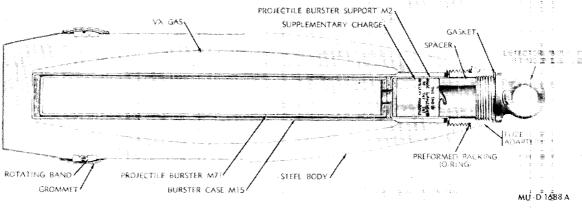
DISPOSAL: WARTIME: Vent and Burn

PEACETIME: Vent and Neutralize

GENERAL INFORMATION: The 155mm, M110 gas projectile is used to contaminate

an area, and is a bursting type projectile.





PROJECTILE, 155mm, GAS, M121A1

AGENT: GB or VX

WEIGHT OF AGENT: GB - 6.0 lbs; VX - 6.5 lbs

DIMENSIONS: 27.59 inches long, 155mm diameter

WEIGHT: 99.70 lbs

FUZE: PD or VT

HAZARDS: High Explosive and Agent, Fragmentation

COLOR CODE: NEW: Gray body with three green bands and one yellow band

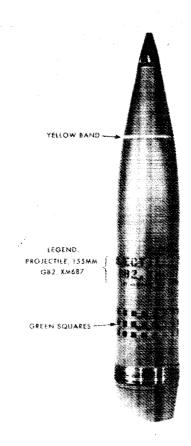
and all markings in green.

DISPOSAL: WARTIME: Vent and Burn

PEACETIME: Vent and Neutralize

GENERAL INFORMATION: The M121A1, 155mm gas projectile is a bursting type

which is used to contaminate a given area.



PROJECTILE, 155mm, GAS, BINARY, XM687

AGENT/FILLER:

GB-2

WEIGHT OF AGENT/FILLER:

25.0 1bs

DIMENSIONS:

37 inches long; 155mm diameter

WEIGHT:

94.0 1bs

FUZE:

PD

HAZARDS:

Agent and High Explosive, Fragmentation

COLOR CODE: NEW: Gray body with three broken green bands and one

yellow band, with all markings in black.

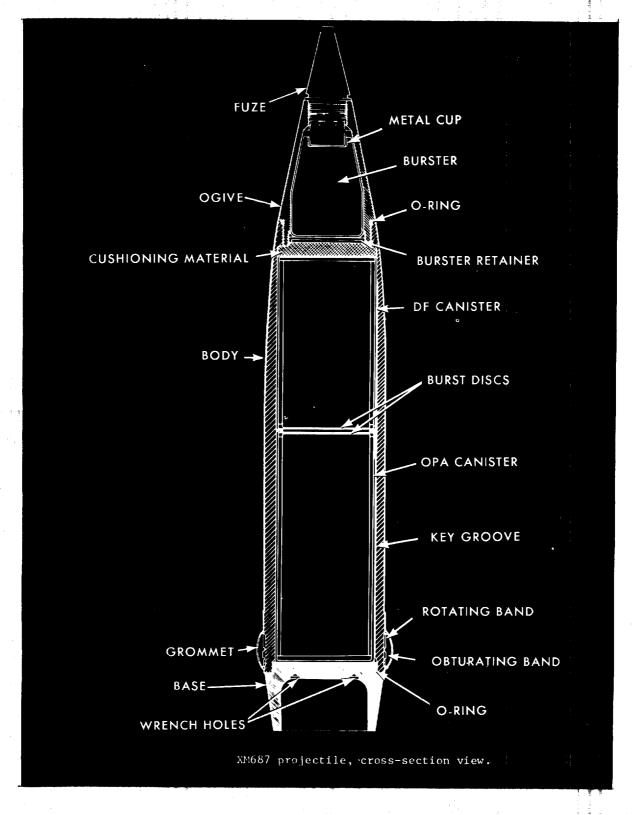
DISPOSAL:

Vent and Neutralize

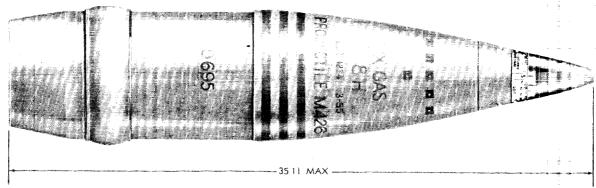
GENERAL INFORMATION:

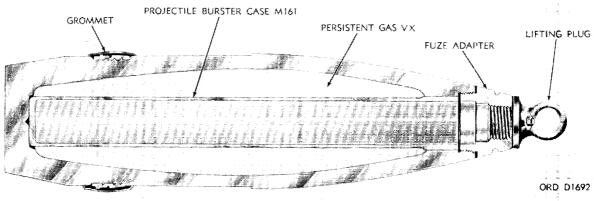
The XM687 projectile is a GB binary munition which is used to produce casualties in the target area. The projectile contains two canisters which are mixed together after the projectile is fired from the weapon. During shipping and storage one canister is kept

separate from the munition.



PROJECTILE, 155mm, GAS, GB-2, XM687





PROJECTILE, 8-INCH GAS, M426

AGENT/FILLER:

GB or VX

WEIGHT OF AGENT/FILLER:

14.5 1bs

DIMENSIONS:

35.11 inches long; 8-inch diameter

WEIGHT:

199 1bs

FUZE:

PD or VT

HAZARDS:

High Explosive and Agent, Fragmentation

COLOR CODE: OLD:

GB - Gray body with one green band and all markings

in green.

NEW:

GB, VX - Gray body with three green bands and one

yellow band, and all markings in green.

DISPOSAL: WARTIME:

Vent and Burn

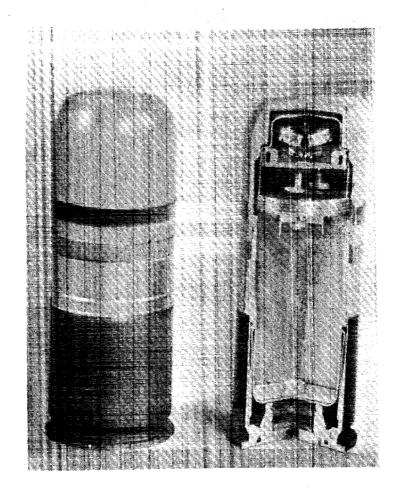
PEACETIME:

Vent and Neutralize

GENERAL INFORMATION:

The projectile is used to produce casualties in

the target area, and is a bursting type.



CARTRIDGE, 40mm, RIOT, M651

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT .116 1bs

DIMENSIONS: 4.5 inches long; 1.6 inches diameter

WEIGHT: 0.68 lbs

FUZE: PD

HAZARDS: Agent and Burning

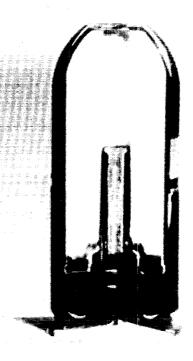
COLOR CODE: NEW: Gray body with one red band and all markings in red.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The M651 cartridge is used in the M79 grenade launcher for hard targets. Upon impact the

projectile will burn for about 25 seconds.





CARTRIDGE, 40mm, RIOT, XM651E3

AGENT/FILLER:

CS

WEIGHT OF AGENT/FILLER:

.232 1bs

DIMENSIONS:

4.5 inches long; 1.6 inches diameter

WEIGHT:

0.68 lbs

FUZE:

Pyrotechnic delay and impact

HAZARDS:

Agent and Burning

COLOR CODE:

Gray body with one red band with all markings

in red.

DISPOSAL:

Burn or Detonate

GENERAL INFORMATION:

The cartridge is used in the M79 grenade launcher for soft targets. The projectile will ignite upon impact or after the delay element has burned

down to the CS mixture.

CARTRIDGE, 40mm, RIOT, E24

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: .209 1bs

DIMENSIONS: 9.0 inches long; 1.5 inches diameter

WEIGHT: 0.75 lbs

FUZE: Pyrotechnic delay 3 to 6 seconds

HAZARDS: Agent, Burning and Ejection

COLOR CODE: NEW: Gray body with one red and one brown band, with

all markings in red.

DISPOSAL: Burn or detonate

GENERAL INFORMATION: The E24 CS cartridge is fired from the M79 grenade

hand. It will burn for about 7 to 28 seconds.



CARTRIDGE, 40mm, RIOT, M674

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: .209 1bs

DIMENSIONS: 9 inches long; 1.5 inches diameter

WEIGHT: 0.75 1bs

FUZE: Pyrotechnic delay 3 to 6 seconds

HAZARDS: Agent, Burning and Ejection

COLOR CODE: NEW: Gray body with one red band and one brown band,

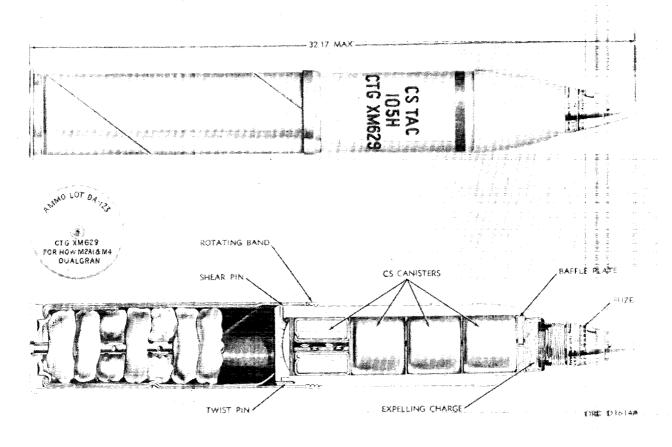
with all markings in red.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The cartridge is fired from the M79 grenade launcher,

by hand or the M8 flare gun and will burn for about

7 to 28 seconds.



CARTRIDGE, 105mm, TAC CS, M629

AGENT/FILLER:

CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER:

3.3 1bs

DIMENSIONS:

32.17 inches long; 105mm diameter

WEIGHT:

42.0 1bs

FUZE:

MTSQ

HAZARDS:

Ejection, Burning and Agent

COLOR CODE: NEW:

Gray body with one red band and all markings in red.

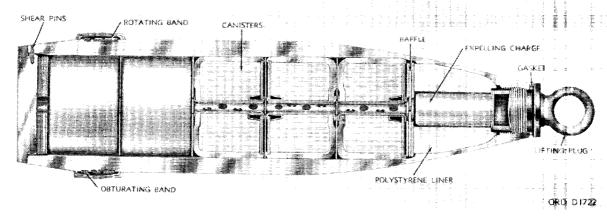
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is a base ejection type that contains CS filled canisters which burn for about 60 seconds.





PROJECTILE, 155mm RIOT, M631

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 10.0 1bs

DIMENSIONS: 27.56 inches

WEIGHT: 96.75 lbs

FUZE: MTSQ

HAZARDS: Ejection, Agent and Burning

COLOR CODE: NEW: Gray body with one red band and all markings in red.

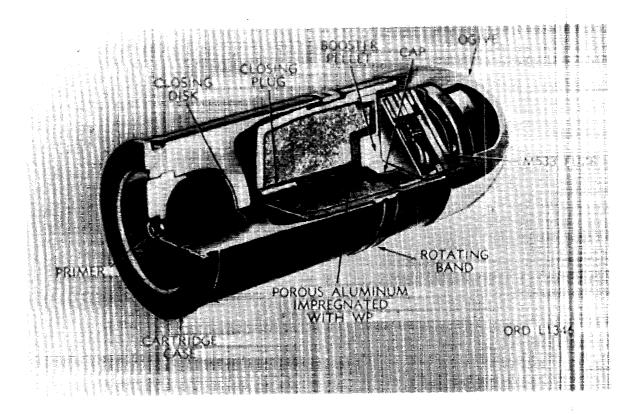
DISPOSAL: Detonate

GENERAL INFORMATION: The projectile contains five CS filled canisters

containing two pounds of CS in each canister; it

is a base ejection type projectile.

27.56 inches long; 155mm diameter



CARTRIDGE, 40mm, SMOKE, XM574E3

AGENT/FILLER: WP

WEIGHT OF AGENT/FILLER: 2 oz

DIMENSIONS: 4.2 inches long; 1.6 inches diameter

WEIGHT: 8 oz

FUZE: PD

HAZARDS: High Explosive and Burning

COLOR CODE: NEW: Light green body with one yellow band and all

markings in red.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used for spotting with the M5

gun system so that the gunner can see where he

is hitting the target.

CARTRIDGE, 40mm, SMOKE, E25

AGENT/FILLER:

Red smoke mixture RS

WEIGHT OF AGENT:

.209 1bs

DIMENSIONS:

9 inches long; 1.5 inches diameter

WEIGHT:

0.75 1bs

FUZE:

Pyrotechnic delay 3 to 6 seconds

HAZARDS:

Burning and Ejection

COLOR CODE: NEW:

Light green body with one brown band and all

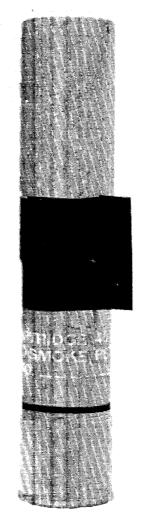
markings in black.

DISPOSAL:

Burn or Detonate

GENERAL INFORMATION:

The cartridge is fired from the M79 gremade launcher or the M8 pyrotechnic pistol and not by hand. It is used as a training round for the E24 CS cartridge.



CARTRIDGE, 40mm, SMOKE, M675

AGENT/FILLER: Red smoke mixture RS

WEIGHT OF AGENT/FILLER: .209 1bs

DIMENSIONS:

WEIGHT: 0.75 lbs

FUZE: Pyrotechnic delay 3 to 6 seconds

HAZARDS: Burning and Ejection

COLOR CODE: NEW: Light green body with one brown band with all

markings in white or black.

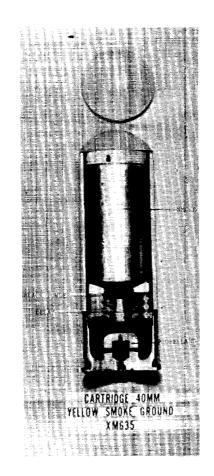
9 inches long; 1.5 inches diameter

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The cartridge is fired by hand or from the M79

grenade launcher or the M8 flare gun, and is used as a training round for the M674 CS filled

cartridge.



CARTRIDGE, 40mm, SMOKE, MARKER, XM635

AGENT/FILLER:

Yellow Smoke Mixture YS

WEIGHT OF AGENT/FILLER:

.154 1bs

DIMENSIONS:

4.5 inches long; 1.6 inches diameter

WEIGHT:

0.8 1bs

FUZE:

Pyrotechnic Delay

HAZARDS:

Burning and Ejection

COLOR CODE: NEW:

White body with all markings in black and a

yellow ogive.

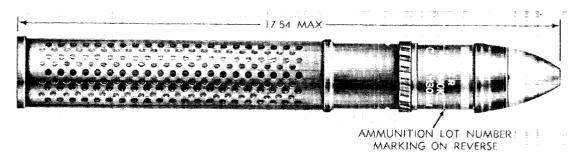
DISPOSAL:

Burn or Detonate

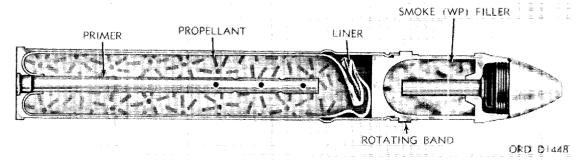
GENERAL INFORMATION:

The XM635 is fired from the M79 grenade launcher and is used to mark ground targets. The smoke $\frac{1}{2}$

candle will burn for about 120 seconds.







CARTRIDGE, 57mm, RR, SMOKE, M308A1

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 0.37 1bs

DIMENSIONS:

17.54 inches long; 57mm diameter

WEIGHT:

5.43 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band with all markings

in yellow.

NEW:

Light green body with one yellow band and all

markings in red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting

and is a bursting type projectile.

CARTRIDGE, 75mm, RR, SMOKE, M311A1

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 1.35 1bs

DIMENSIONS:

28.92 inches long; 75mm diameter

WEIGHT:

23.20 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in red.

NEW:

Light green body with one yellow band and all

markings in red.

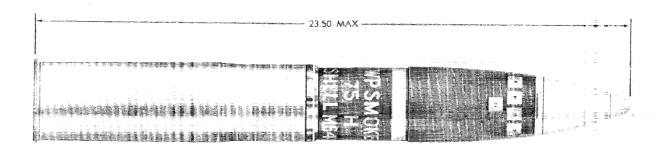
DISPOSAL:

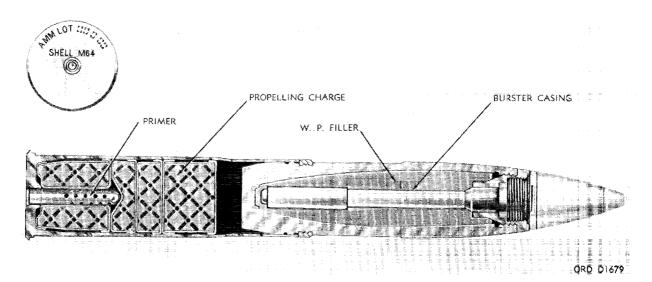
Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting

and is a bursting type.





CARTRIDGE, 75mm, SMOKE, M64

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 1.34 1bs

DIMENSIONS:

23.50 inches long; 75mm diameter

WEIGHT:

19.0 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

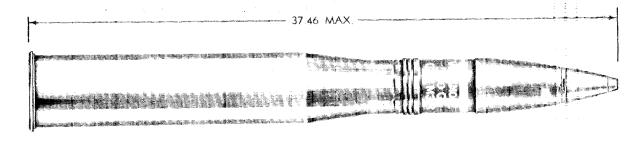
DISPOSAL:

Detonate

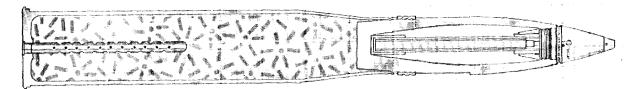
GENERAL INFORMATION:

The cartridge is used for screening and spotting

and is the bursting type.







ORDE D1624

CARTRIDGE, 90mm, SMOKE, M313

AGENT/FILLER: WP

WEIGHT OF AGENT/FILLER: 1.97 1bs

DIMENSIONS: 37.6

37.66 inches long; 90mm diameter

WEIGHT:

40.52 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

markings in red.

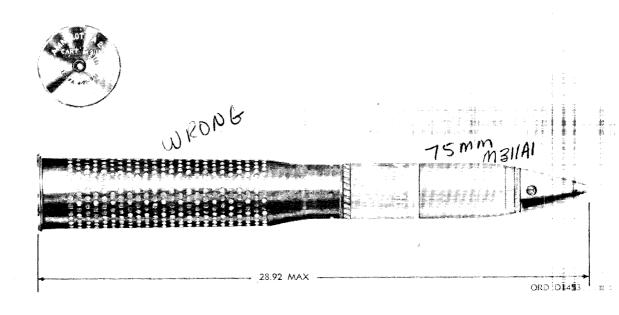
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting,

and is a bursting type projectile.



CARTRIDGE, 105mm, RR, SMOKE, M325

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER:

4.06 1bs

DIMENSIONS:

40.73 inches long; 105mm diameter

WEIGHT:

50.75 lbs

FUZE:

Impact

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

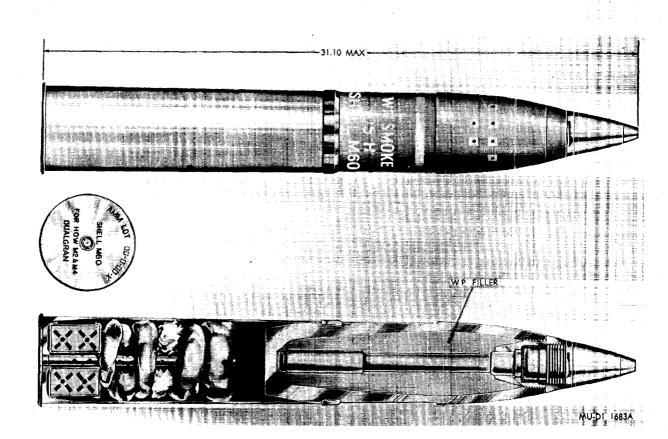
in yellow.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The 105mm RR cartridge is used for spotting and screening, and is a bursting type projectile.



CARTRIDGE, 105mm, SMOKE, M60

AGENT/FILLER: WP

WEIGHT OF AGENT/FILLER: 4.0 1bs

DIMENSIONS: 31.07 inches long; 105mm diameter

WEIGHT: 43.81 1bs

FUZE: PD

HAZARDS: High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

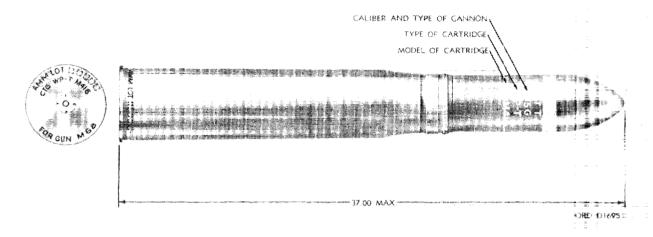
NEW: Light green body with one yellow band and all

markings in red.

DISPOSAL: Detonate

GENERAL INFORMATION: The 105mm WP projectile is used for screening and

spotting, and is a bursting type projectile.



CARTRIDGE, 105mm, SMOKE, M416

AGENT/FILLER:

WP-T

WEIGHT OF AGENT/FILLER: 6.0 1bs

DIMENSIONS:

37.0 inches long; 105mm diameter

WEIGHT:

45.5 1bs

FUZE:

BD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: NEW:

Light green body with one yellow band with all

markings in red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is fired from the M60 Tank and is

used for screening and spotting. It is a

bursting type projectile.

CARTRIDGE, 105mm, SMOKE, BE, M84A1

AGENT/FILLER:

HC Smoke Mixture

WEIGHT OF AGENT/FILLER:

12.3 lbs

DIMENSIONS:

30.49 inches long; 105mm diameter

WEIGHT:

41.96 1bs

FUZE:

MT or MTSQ

HAZARDS:

Burning and Ejection

COLOR CODE: NEW:

Light green body with all markings in black.

DISPOSAL:

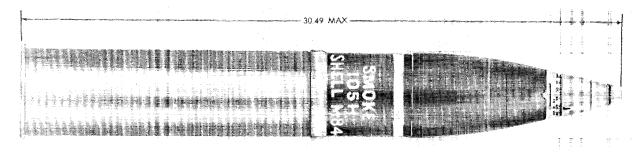
Detonate

GENERAL INFORMATION:

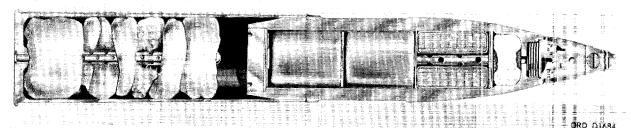
The M84Al is a base ejection type cartridge which is used for screening, spotting and signaling,

and is filled with HC smoke mixture only.

CARTRIDGE, 105mm, SMOKE, BE, M84A1







CARTRIDGE, 105mm, SMOKE, BE, M84/M84B1

AGENT/FILLER: HC or colored smoke (red, green, violet, yellow)

WEIGHT OF AGENT/FILLER: HC - 7.50 lbs; Red - 5.21 lbs; Green - 5.13 lbs;

Yellow - 4.92 lbs; Violet - 5.13 lbs

DIMENSIONS: 30.49 inches long; 105mm diameter

WEIGHT: HC - 41.9 lbs; colored smoke - 39.7 lbs

FUZE: TSQ or MTSQ

HAZARDS: Burning, Ejection

COLOR CODE: OLD: Gray body with one yellow band with all markings

in yellow.

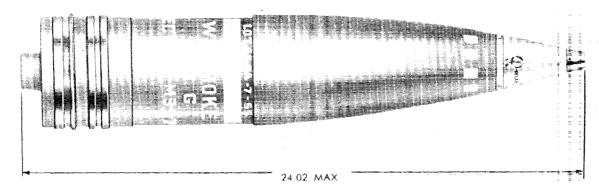
NEW: Light green body with all markings in black.

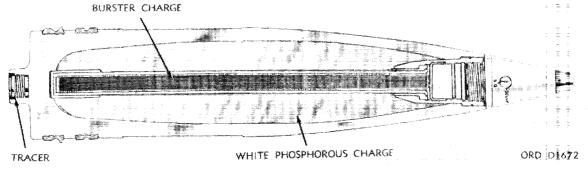
DISPOSAL: Detonate

GENERAL INFORMATION: The M84/M84Bl base ejection projectile is used

for screening, spotting and signaling. The projectile contains three canisters which will

burn for about 90 seconds.





PROJECTILE, 120mm, SMOKE, M357

AGENT/FILLER: WP-T

WEIGHT OF AGENT/FILLER: 7.5 1bs

DIMENSIONS: 24.02 inches long; 120mm diameter

WEIGHT: 50.41 lbs

FUZE: PD

HAZARDS: High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

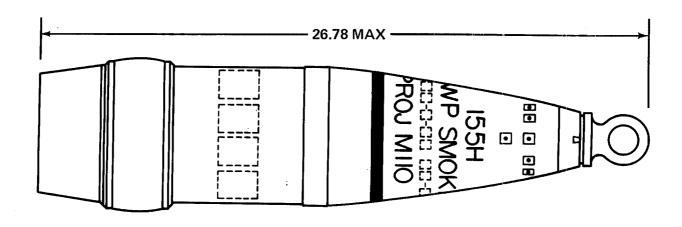
NEW: Light green body with one yellow band and all

markings in red.

DISPOSAL: Detonate

GENERAL INFORMATION: The projectile is used for screening and spotting,

and is the bursting type.



AR199679

PROJECTILE, 155mm, SMOKE, M110

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 15.6 lbs

DIMENSIONS:

27.57 inches long; 155mm diameter

WEIGHT:

97.50 1bs

FUZE:

Impact

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

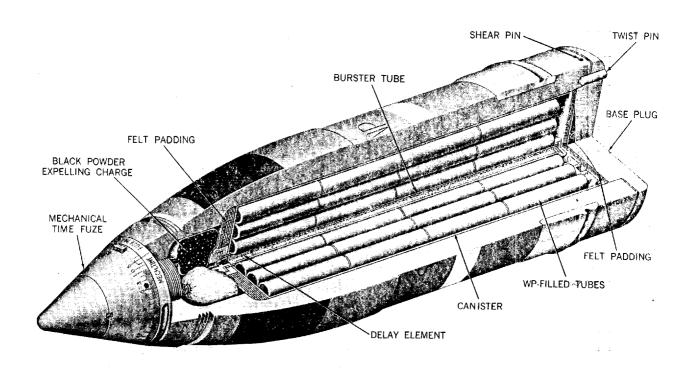
markings in red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The 155mm, M110 projectile is used for screening and spotting, and is a bursting type projectile.



PROJECTILE, 5"/38, BE, SMOKE, MK45 MOD-0

AGENT/FILLER:

WEIGHT OF AGENT/FILLER: 7.1 1bs

DIMENSIONS: 20 inches long; 5 inches diameter

WP

WEIGHT: 54.5 lbs

FUZE: MT

HAZARDS: Burning, High Explosive, Ejection and fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

DISPOSAL: Detonate

GENERAL INFORMATION: The projectile is used for screening and spotting.

It is a base ejection type which contains an M5

canister loaded with WP and a high explosive burster.

PROJECTILE, 5"/54, BE, SMOKE, MK 48 MOD-0

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER:

7.1 1bs

DIMENSIONS:

20 inches long; 5 inches diameter

WEIGHT:

53.0 1bs

FUZE:

MT

HAZARDS:

Burning, High Explosive, Ejection and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

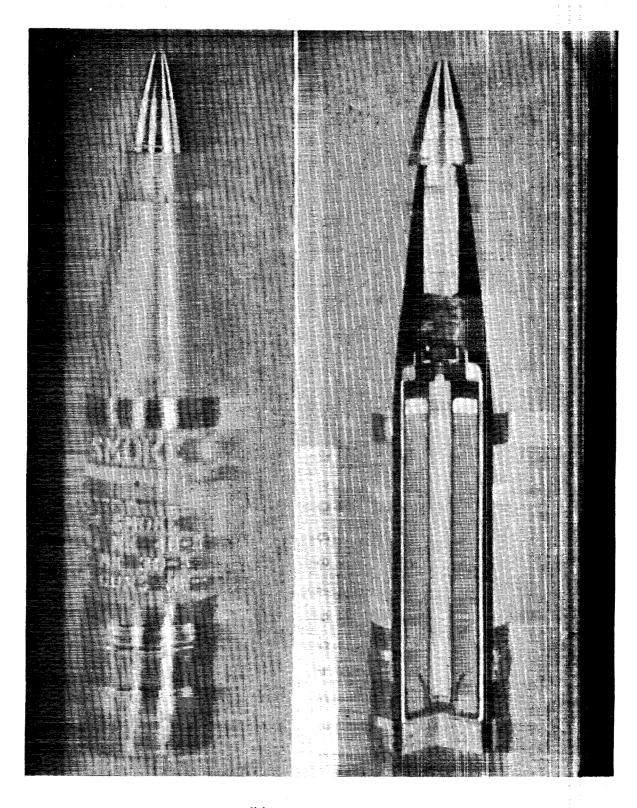
in yellow.

DISPOSAL:

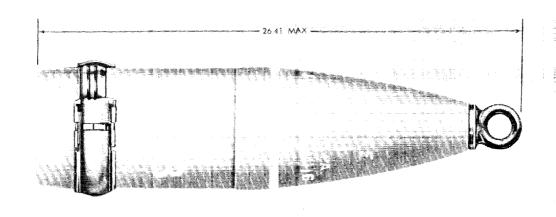
Detonate

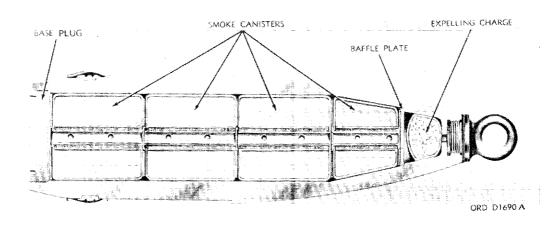
GENERAL INFORMATION:

The projectile is used for screening and spotting. It is a base ejection type which contains an MK14 canister loaded with WP and a high explosive burster.



PROJECTILE, 5"/54, BE, SMOKE, WP, MK 48 MOD-0





PROJECTILE, 155mm, SMOKE, BE, M116

AGENT/FILLER: HC or Violet Smoke Mixture

WEIGHT OF AGENT/FILLER: HC - 25.84 lbs; Violet - 17.19 lbs

DIMENSIONS: 26.41 inches long; 155mm diameter

WEIGHT: 86.43 lbs

FUZE: MTSQ or TSQ

HAZARDS: Ejection and Burning

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

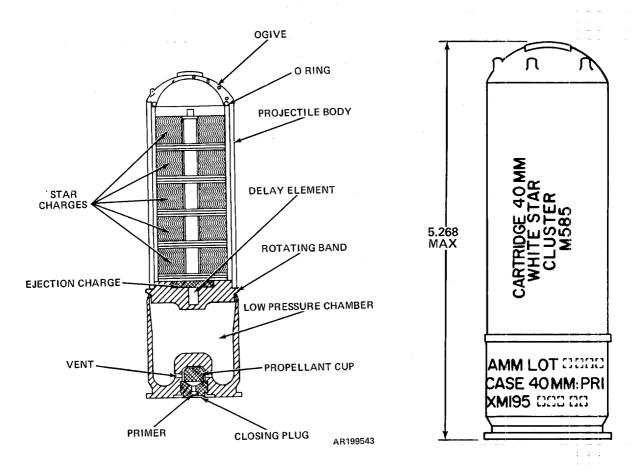
NEW: Light green body with all markings in white or

black.

DISPOSAL: Detonate

GENERAL INFORMATION: The projectile is used for screening and spotting

and is a base ejection type.



CARTRIDGE, 40mm, WHITE STAR CLUSTER, XM585

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 5 each 17 cm pellets

DIMENSIONS: 4.3 inches long; 1.6 inches diameter

WEIGHT: 0.5 lbs

FUZE: Pyrotechnic delay

HAZARDS: Burning, Ejection

COLOR CODE: NEW: White body with all markings in black and the

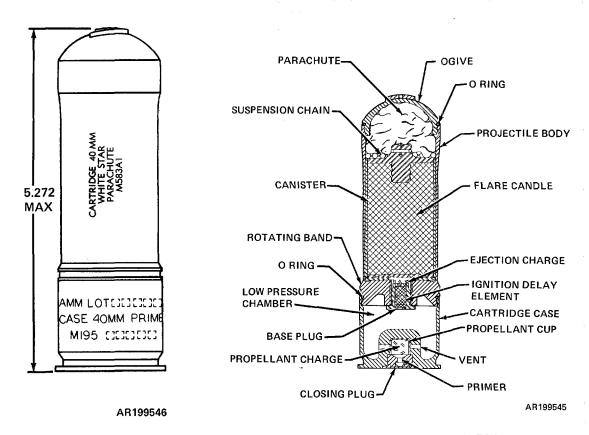
plastic ogive the color of the signal.

DISPOSAL: Burn or Detonate.

GENERAL INFORMATION: The XM585 cartridge is fired from the M79 grenade

launcher. There is also the XM663 green star and the XM664 red star not shown. The plastic ogive will have a raised letter and five dots

around the letter for the color and type of signal.



CARTRIDGE, 40mm, WHITE STAR PARACHUTE, XM583

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: .143 1bs

•

DIMENSIONS:

WEIGHT: 0.5 1bs

FUZE: Pyrotechnic delay 0.5 seconds

HAZARDS: Burning, Ejection

COLOR CODE: NEW: White body with all markings in black and the

ogive the color of the signal.

4.3 inches long; 1.6 inches diameter

DISPOSAL: Burn or Detonate

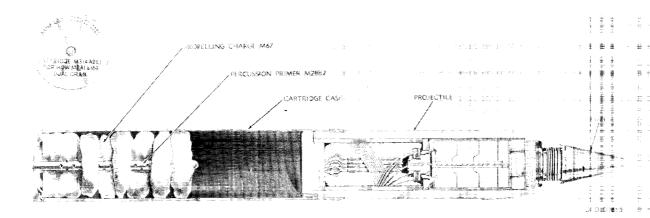
GENERAL INFORMATION: The XM583 cartridge is fired from the M79 grenade

launcher. There is also the XM661 green star and the XM662 red star (not shown). The burning time is 40 seconds. The plastic ogive will be the color

of the signal and it will have a raised W, G, R

letter also for night use.

ILLUMINATING IOSH CTG M314A2EI



CARTRIDGE, 105mm ILLUMINATING, M314A2E1

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 1.74 1bs

DIMENSIONS: 32.17 inches long; 105mm diameter

WEIGHT: 46.43 1bs

FUZE: MT or MTSQ

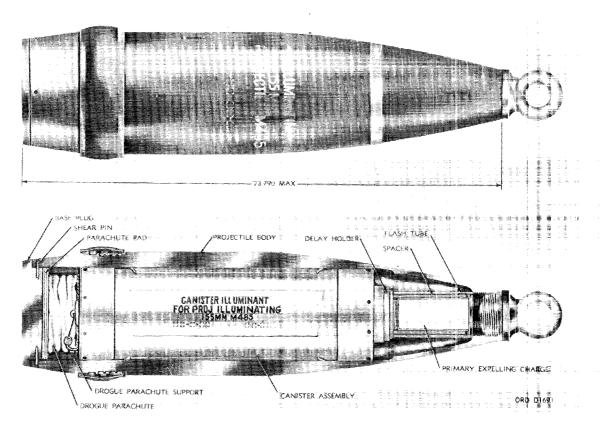
HAZARDS: Burning, Ejection

COLOR CODE: NEW: White body with all markings in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used to provide light over the

target area at night, and is a base ejection type.



PROJECTILE, 155mm, ILLUMINATING, M485

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 5.8 1bs

DIMENSIONS: 23.79 inches long; 155mm diameter

WEIGHT: 93.66 lbs

FUZE: MTSQ

HAZARDS: Burning, Ejection

COLOR CODE: OLD: Gray body with one white band and all markings

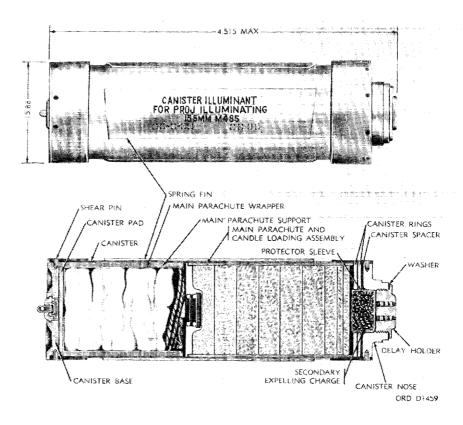
in white.

NEW: White body with all markings in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The projectile is used for battlefield illumination

> and is a base ejection type, which will burn for about 120 seconds, with about 1,000,000 candle power.



CANISTER ILLUMINATING, FOR 155mm PROJECTILE, M485

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 5.8 1bs

DIMENSIONS: 15.88 inches long; 4.515 inches diameter

WEIGHT: Unknown

FUZE: None

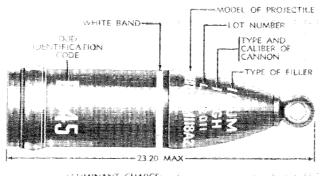
HAZARDS: Burning, Ejection

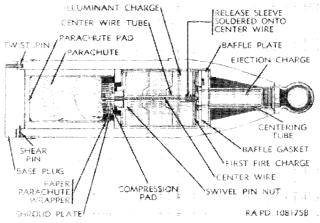
COLOR CODE: NEW: Aluminum body with all markings in black.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The canister is used in the M485, 155mm

illuminating projectile.





PROJECTILE, 155mm, ILLUMINATING, M118A2

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 4.30 1bs

DIMENSIONS: 24.20 inches long; 155mm diameter

WEIGHT: 103.6 lbs

FUZE: MT

HAZARDS: Ejection, Burning

COLOR CODE: OLD: Gray body with one white band with all markings

in white.

DISPOSAL: Detonate

GENERAL INFORMATION: The projectile is used to provide light over the

target area, and is a base ejection type projectile.

CARTRIDGE, 4.2 INCH, GAS, M2/M2A1

AGENT/FILLER: CNB, CNS, CK, CG, H, HD, HT

WEIGHT OF AGENT/FILLER: CNB - 5.45 lbs; CNS - 7.00 lbs; CK - 5.00 lbs;

CG - 6.25 lbs; H - 6.20 lbs; HD - 8.00 lbs;

HT - 5.751bs

DIMENSIONS: 21.01 inches long; 4.2 inches diameter

WEIGHT: 24.67 1bs

FUZE: PD

HAZARDS: High Explosive, Agent and Fragmentation

COLOR CODE: OLD: CNS, CNB - gray body with one red band and all

markings in red.

CG, CK - gray body with one green band and all

markings in green.

H, HT, HD - gray body with two green bands and

all markings in green.

NEW: CNS, CNB - Gray body with one red band and one

yellow band and all markings in red.

CG, CK - gray body with one green band and one

yellow band and all markings in green.

H, HT, HD - gray body with two green bands and

one yellow band and all markings in green.

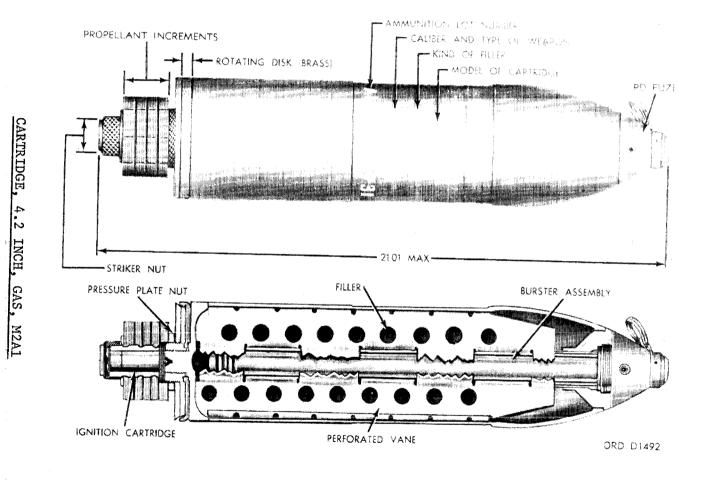
DISPOSAL: WARTIME: Vent and Burn

PEACETIME: Vent and neutralize

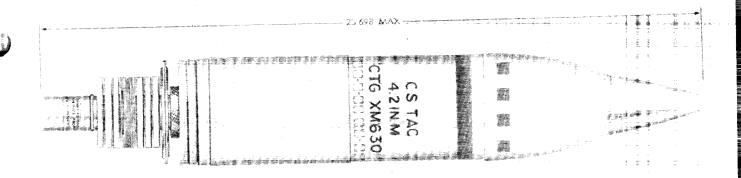
GENERAL INFORMATION: The projectile can be filled with riot control,

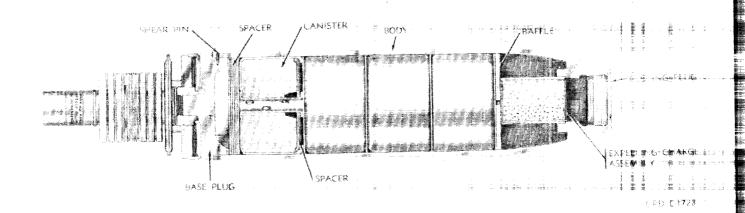
blood, choking or blister agents, and is a

bursting type projectile.



L38





CARTRIDGE, 4.2 INCH, TAC-CS, M630

AGENT/FILLER: CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 1.0 1bs

DIMENSIONS:

25.698 inches long; 4.2 inch diameter

WEIGHT:

25.07 1bs

FUZE:

MTSQ

HAZARDS:

Ejection, Burning and Agent

COLOR CODE: OLD:

None

NEW:

Gray body with one red band and all markings in

red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The projectile is a base ejection type which contains 4 canisters filled with riot control agent CS. The canisters will burn for about

60 seconds.

CARTRIDGE, 60mm, SMOKE, M302

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 0.765 1bs

DIMENSIONS:

11.07 inches long; 60mm diameter

WEIGHT:

3.98 lbs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

markings in red.

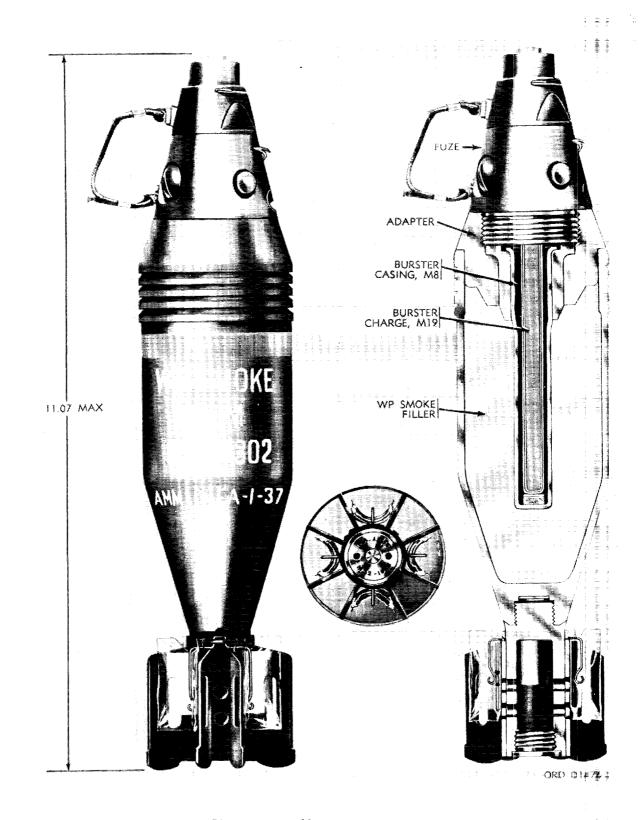
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting,

and is a bursting type projectile.



CARTRIDGE, 60mm SMOKE, M302

CARTRIDGE, 60mm, SMOKE, M302E1

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 0.765 1bs

DIMENSIONS:

13.07 inches long; 60mm diameter

WEIGHT:

4.08 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: NEW:

Light green body with one yellow band and all

markings in red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting. It is the same cartridge as the M302 except that

the M302E1 has a 2-inch fin extension.

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CARTRIDGE, 81mm, SMOKE, M57A1

AGENT/FILLER:

WP or FS

WEIGHT OF AGENT/FILLER: WP - 4.06 lbs; FS - 4.59 lbs

DIMENSIONS:

24.39 inches long; 81mm diameter

WEIGHT:

12.46 lbs

FUZE:

PD

HAZARDS:

High Explosive, Burning, Agent and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

WP - light green body with one yellow band and

all markings in red.

FS - light green body with one yellow band and

all markings in black.

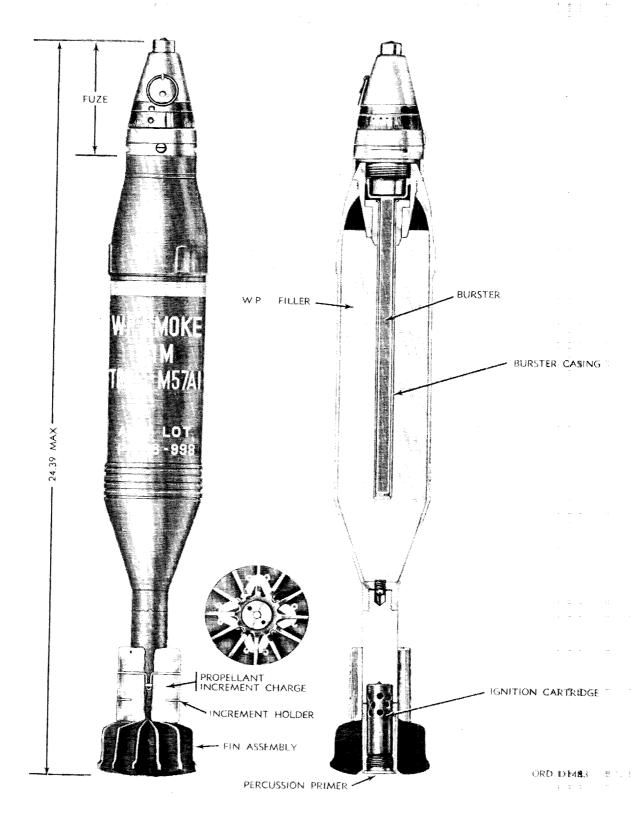
DISPOSAL:

Detonate

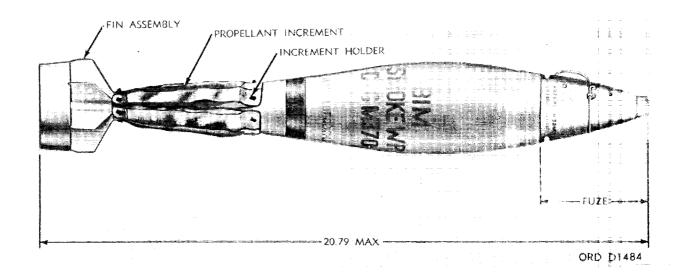
GENERAL INFORMATION:

The cartridge is used for screening smoke and

spotting, and is a bursting type munition.



CARTRIDGE, 81mm SMOKE, M57A1



CARTRIDGE, 81mm, SMOKE, M370

AGENT/FILLER: WP

WEIGHT OF AGENT/FILLER: 1.6 lbs

WEIGHT: 9.34 lbs

DIMENSIONS:

FUZE: PD

HAZARDS: High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW: Light green body with one yellow band and all

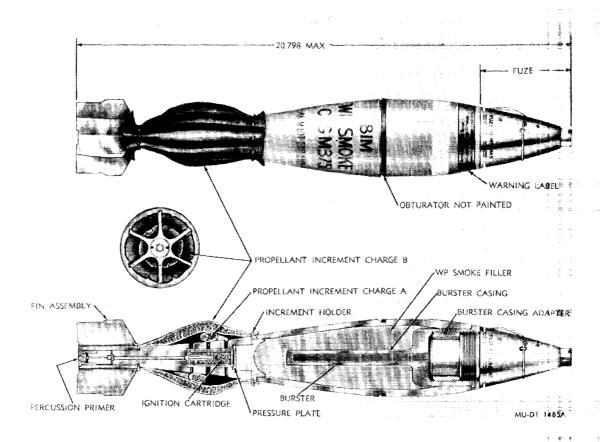
20.79 inches long; 81mm diameter

markings in red.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used for screening and spotting,

and is a bursting type projectile.



CARTRIDGE, 81mm, SMOKE, M375/M375A2

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 1.6 1bs

DIMENSIONS:

20.80 inches long; 81mm diameter

WEIGHT:

9.14 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

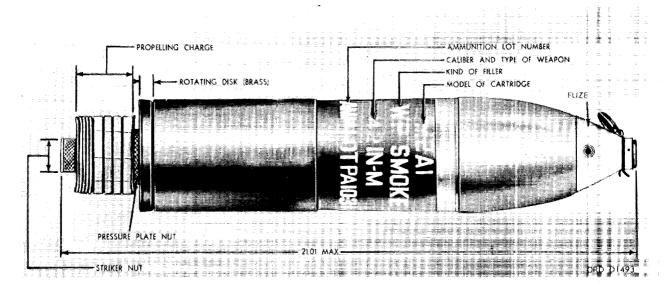
markings in red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting, and provides a longer range than the M370 cartridge.



CARTRIDGE, 4.2 INCH, SMOKE, M2/M2A1

AGENT/FILLER: WP, PWP, FM, FS

WEIGHT OF AGENT/FILLER: WP, FM, FS - 7.50 lbs; PWP - 6.25 lbs

DIMENSIONS: 21.01 inches long; 4.2 inch diameter

WEIGHT: 24.91 1bs

FUZE: PD

HAZARDS: High Explosive, Burning, Agent and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW: Light green body with one yellow band and all

markings in red, for WP and PWP.

Light green body with one yellow band and all

markings in black, for FM and FS.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used for screening and spotting,

and in some cases for incendiary and casualty use.

The projectile is a bursting type.

CARTRIDGE, 4.2 INCH, SMOKE, M328

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 7,50 1bs

DIMENSIONS:

25.77 inches long; 4.2 inch diameter

WEIGHT:

28.66 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band, with all markings

in yellow.

NEW:

Light green body with one yellow band, with all

markings in red.

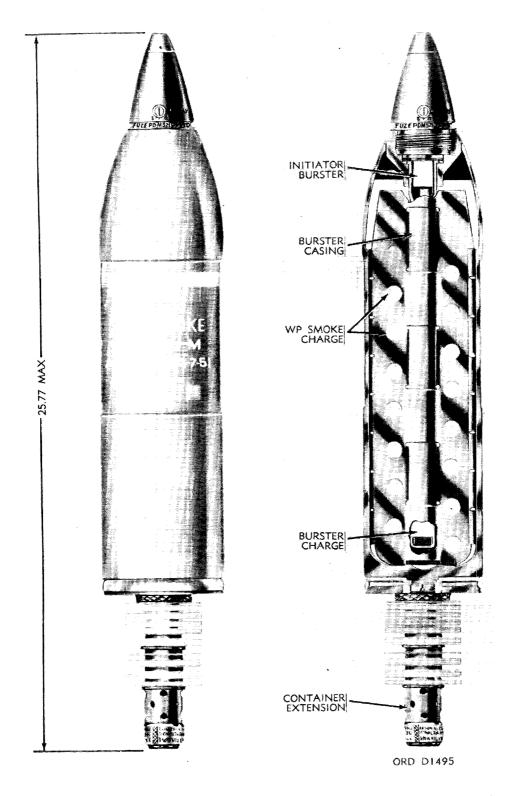
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening and spotting,

and is a bursting type projectile.



CARTRIDGE, 4.2 INCH SMOKE, M328

CARTRIDGE, 4.2 INCH, SMOKE, M328A1

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER:

8.14 1bs

DIMENSIONS:

25.77 inches long; 4.2 inch diameter

WEIGHT:

28.66 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

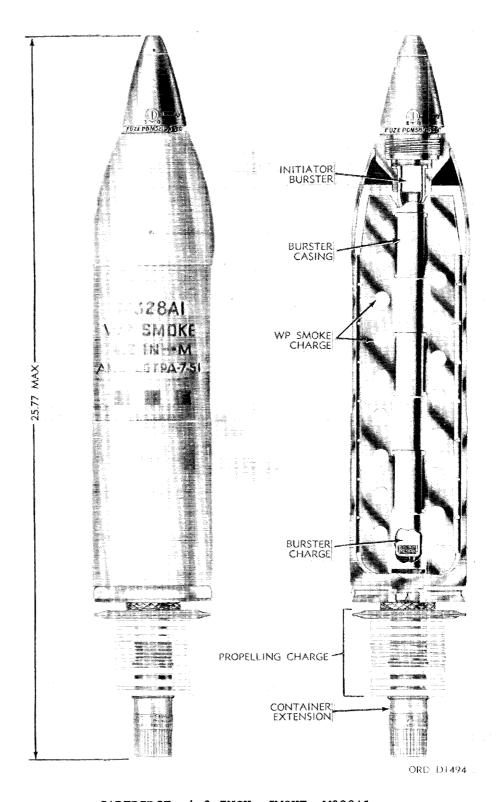
markings in red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used for screening, incendiary and casualty, and is a bursting type projectile.



CARTRIDGE, 4.2 INCH, SMOKE, M328A1

CARTRIDGE, 60mm, ILLUMINATING, M83A3

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER: 0.49 1bs

DIMENSIONS:

14.28 inches long; 60mm diameter

WEIGHT:

4.15 1bs

FUZE:

Time

HAZARDS:

Ejection, Burning

COLOR CODE: OLD: Gray body with one white band and all markings

in white.

NEW:

White body with all markings in black.

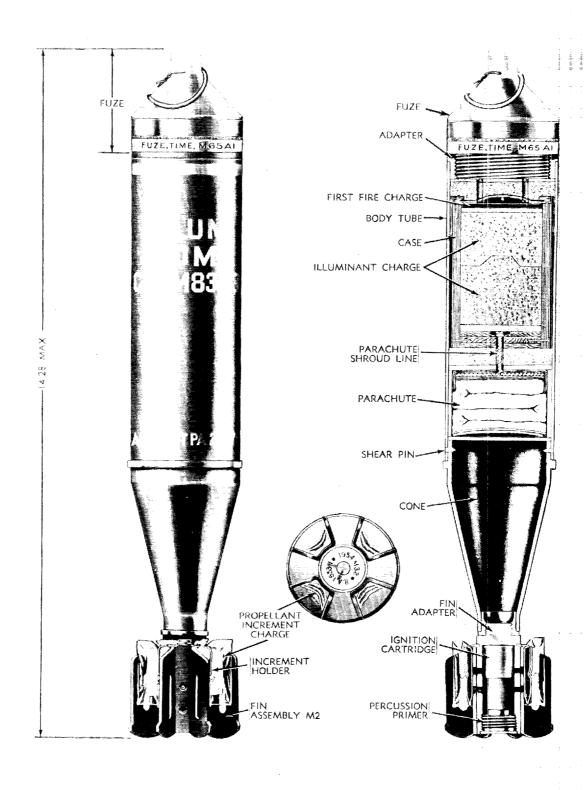
DISPOSAL:

Detonate

GENERAL INFORMATION:

The cartridge is used at night to provide light over the target area, and is a base ejection type

projectile.



CARTRIDGE, 60mm, ILLUMINATING, M83A3

CARTRIDGE, 81mm, ILLUMINATING, M301A2

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER: 1.37 1bs

DIMENSIONS:

22.48 inches long; 81mm diameter

WEIGHT:

10.1 lbs

FUZE:

Time

HAZARDS:

Burning, Ejection

COLOR CODE: OLD: Gray body with one white band and all markings

in white.

NEW:

White body with all markings in black.

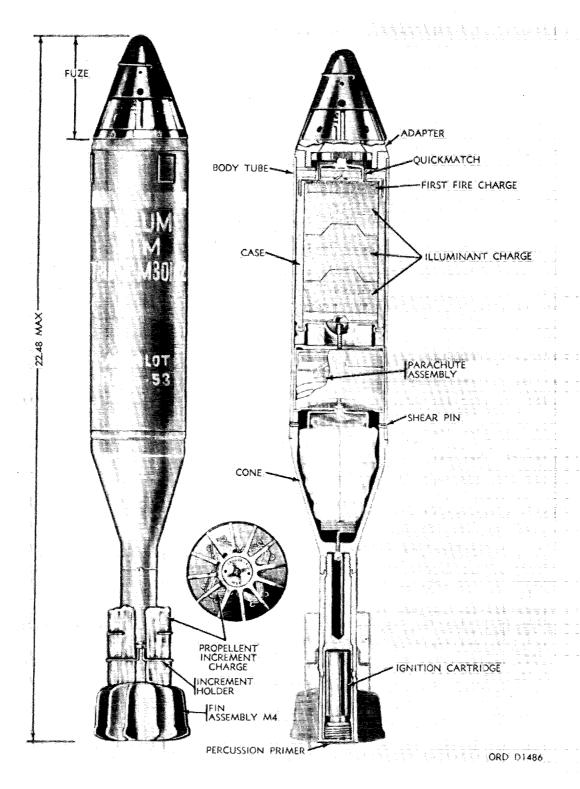
DISPOSAL:

Detonate

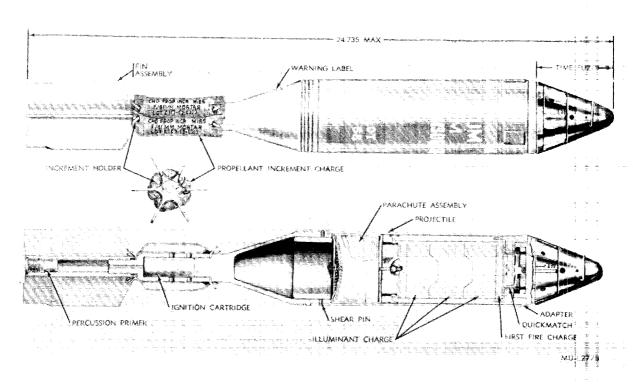
GENERAL INFORMATION:

The cartridge is used to illuminate the target area at night, and is a base ejection type projectile which will burn for about 60 seconds

with a candle power of about 500,000.



CARTRIDGE, 81mm, ILLUMINATING, M301A2



CARTRIDGE, 81mm, ILLUMINATING, M301A3

24.74 inches long; 81mm diameter

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 1.37 1bs

WEIGHT: 10.1 lbs

FUZE: Time

DIMENSIONS:

HAZARDS: Burning, Ejection

COLOR CODE: OLD: Gray body with one white band and all markings

in white.

NEW: White body with all markings in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used for illuminating a desired

point or area, and is a base ejection type

projectile.

CARTRIDGE, 4.2 INCH, ILLUMINATING, M335

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 3.31 1bs

DIMENSIONS: 25.70 inches long; 4.2 inch diameter

WEIGHT: 26.70 lbs

FUZE: MT

HAZARDS: Burning, Ejection

COLOR CODE: OLD: Gray body with one white band with all markings

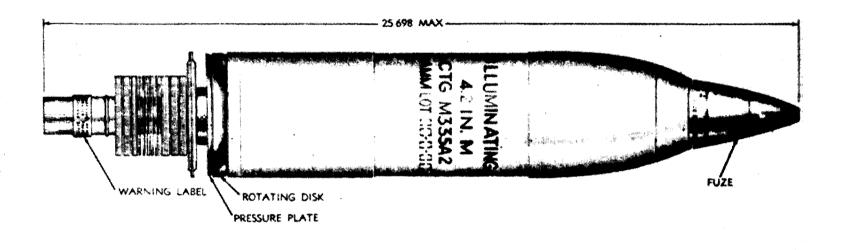
in white.

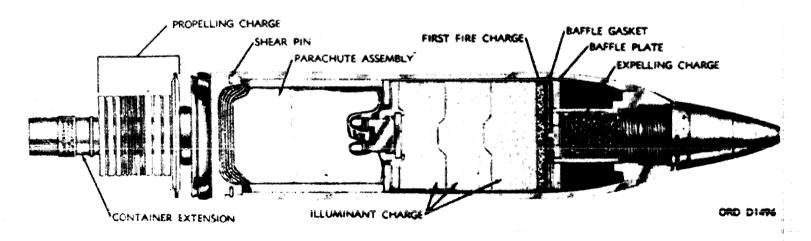
NEW: White body with all markings in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used at night to provide light

over the target area, and is a base ejection type.





CARTRIDGE, 4.2 INCH, ILLUMINATING, M335A1

AGENT/FILLER:

Illuminating Mixture

WEIGHT OF AGENT/FILLER: 3.31 1bs

DIMENSIONS:

25.70 inches long; 4.2 inch diameter

WEIGHT:

26.70 lbs

FUZE:

MT

HAZARDS:

Burning, Ejection

COLOR CODE: OLD:

Gray body with one white band and all markings

in white.

NEW:

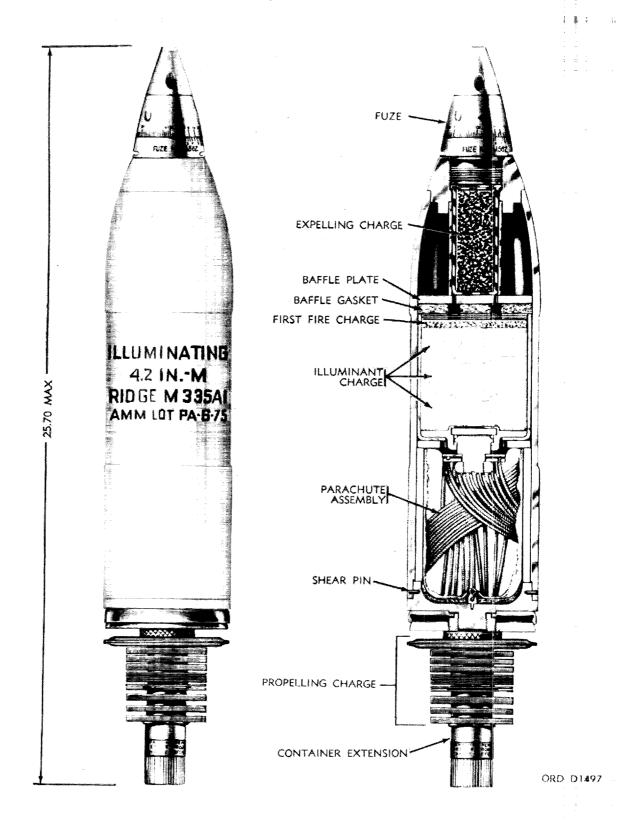
White body with all markings in black.

DISPOSAL:

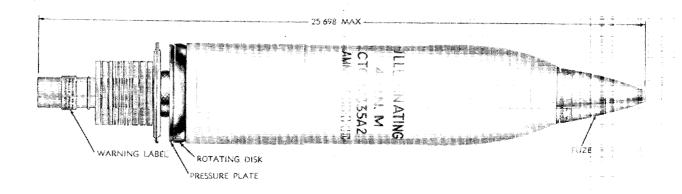
Detonate

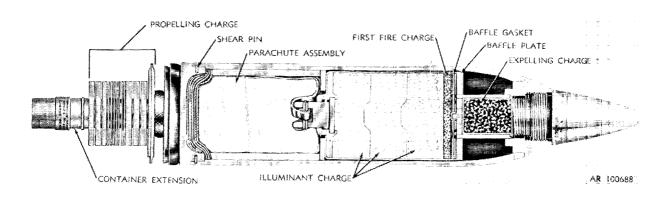
GENERAL INFORMATION:

The cartridge is used to provide light at night over the target area, and is a base ejection type.



CARTRIDGE, 4.2 INCH, ILLUMINATING, M335A1





CARTRIDGE, 4.2 INCH, ILLUMINATING, M335A2

AGENT/FILLER: Illuminating Mixture

WEIGHT OF AGENT/FILLER: 3.31 1bs

DIMENSIONS: 25.70 inches long; 4.2 inch diameter

WEIGHT: 26.70 lbs

FUZE: MT

HAZARDS: Ejection, Burning

COLOR CODE: OLD: Gray body with one white band with all markings

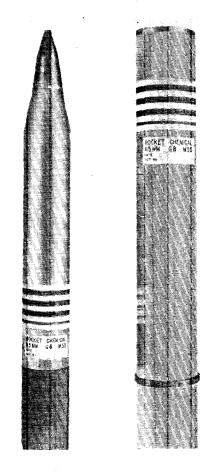
in white.

NEW: White body with all markings in black.

DISPOSAL: Detonate

GENERAL INFORMATION: The cartridge is used to provide light at night

over the target area, and is a base ejection type.



ROCKET, 115mm, GAS, NONPERSISTENT, M55

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER: 10 1bs

DIMENSIONS:

78.0 inches long; 4.5 inches diameter

WEIGHT:

58 1bs

FUZE:

PD

HAZARDS:

Agent, High Explosive, and Static Electricity

COLOR CODE: NEW:

Aluminum body with a gray tape around the warhead containing three green bands and one yellow band;

all markings in green.

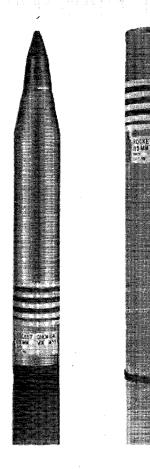
DISPOSAL:

Open and Neutralize

GENERAL INFORMATION:

The M55 Rocket is fired from the M91 launcher and has a range of 12,000 meters. Upon impact with the target area the warhead explodes and releases

the agent.



ROCKET, 115mm, GAS, PERSISTENT, M55

AGENT/FILLER:

VX

WEIGHT OF AGENT/FILLER:

10 1bs

DIMENSIONS:

78.0 inches long; 4.5 inches diameter

WEIGHT:

58 1bs

FUZE:

PD

HAZARDS:

Agent, High Explosive, and Static Electricity

COLOR CODE: NEW: Aluminum body with a gray tape around the warhead containing three green bands and one yellow band;

all markings in green.

DISPOSAL:

Open and Neutralize

GENERAL INFORMATION:

The M55 Rocket is fired from the M91 launcher and has a range of 12,000 meters. Upon impact with the target area the warhead explodes and releases

the agent.





ROCKET, PRACTICE, SIMULANT, 115mm, M61

AGENT/FILLER: EG - Simulant for GB and VX

WEIGHT OF AGENT/FILLER: 10 1bs

DIMENSIONS: 78.0 inches long; 4.5 inches diameter

WEIGHT: 58 1bs

FUZE: PD

HAZARDS: High Explosive and Static Electricity

COLOR CODE: NEW: Aluminum body with a blue tape containing one

yellow band and all markings in white.

DISPOSAL: Burn

GENERAL INFORMATION: The M61 Rocket is the same size as the M55 Rocket

and is the practice rocket which is loaded with

simulant EG in place of agents GB or VX.



ROCKET, TRAINING, DUMMY, 115mm, M60

AGENT/FILLER: Empty

WEIGHT OF AGENT/FILLER: None

DIMENSIONS: 78.0 inches long; 4.5 inches diameter

WEIGHT: 58 1bs

FUZE: PD Dummy

HAZARDS: None

COLOR CODE: NEW: Aluminum body with blue tape and all markings

in white.

DISPOSAL: Salvage

GENERAL INFORMATION: The M60 Rocket is the same size and weight as

the M55 and M61 except that it has no live

components and is used for training and loading.

WARHEAD, ROCKET, GAS, NONPERSISTENT, 762mm, ABC-M190

AGENT/FILLER:

GB, 368 M139 Bombs

WEIGHT OF AGENT/FILLER:

478 1bs

DIMENSIONS:

30 inches diameter; 10 feet 11 inches long

WEIGHT:

1,716 lbs

FUZE:

MT 2 each

HAZARDS:

Agent and High Explosive

COLOR CODE: NEW:

Gray body with one yellow band, three green bands,

and all markings in green.

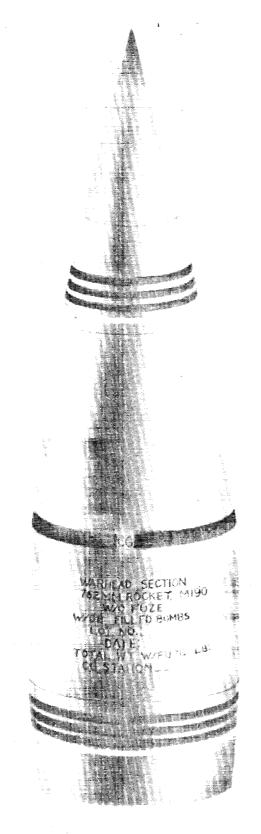
DISPOSAL:

Remove bombs and open and neutralize

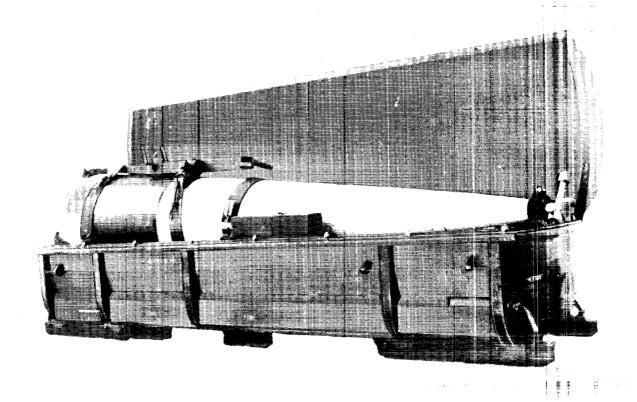
GENERAL INFORMATION:

The 762mm rocket is a free flight rocket which is filled with 368~Ml39~GB gas bombs which are released in the air over the target and upon impact with the

ground the bombs detonate and release the GB.



WARHEAD SECTION, 762mm ROCKET, GAS, NONPERSISTENT GB, ABC-M190



WARHEAD, GAS, NONPERSISTENT, M212

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER: 429 lbs, 330 M139 bomblets

DIMENSIONS:

139 inches long; 31 inches diameter

WEIGHT:

2,069 1bs

FUZE:

M17 fuzing system (barometric)

HAZARDS:

Agent and High Explosive

COLOR CODE: NEW:

and all markings in green.

DISPOSAL:

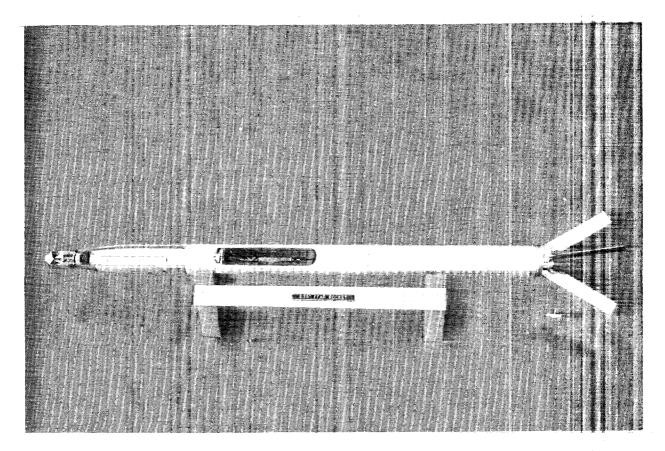
Open and neutralize

GENERAL INFORMATION:

The M212 warhead is used on the Sergeant guided missile and contains 330 M139 GB bomblets. It is opened by the use of det cord to release the bomblets in the air over the target area, where they will

Gray body with three green bands, one yellow band,

detonate upon impact with the ground.



WARHEAD, SMOKE, 2.75 INCH, M156

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 2.1 1bs

DIMENSIONS:

12.9 inches long; 2.75 inches diameter

WEIGHT:

8.9 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

markings in light red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The 2.75 inch rocket is used for air-to-ground marking of targets, and is a bursting type warhead. It will use only the MK-40 rocket

motor for Army use.



WARHEAD, SPOTTING, 2.75 INCH, M157

AGENT/FILLER:

Red dye and HE

WEIGHT OF AGENT/FILLER: 2.0 1bs

DIMENSIONS:

12.9 inches long; 2.75 inches diameter

WEIGHT:

8.9 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: NEW:

Light green body with one yellow band and all markings in black, with three red CCC above

the yellow band.

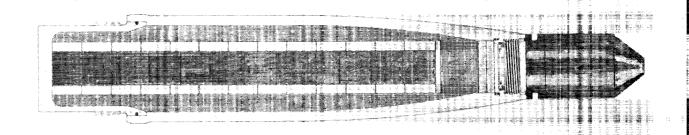
DISPOSAL:

Detonate

GENERAL INFORMATION:

The M157 is used for spotting and is a bursting

type warhead.



WARHEAD, SPOTTING, 2.75 INCH, M158

AGENT/FILLER:

Yellow dye and HE

WEIGHT OF AGENT/FILLER: 2.0 1bs

DIMENSIONS:

12.9 inches long; 2.75 inches diameter

WEIGHT:

8.9 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: NEW:

Light green body with one yellow band and all markings in black, with three yellow CCC above

the yellow band.

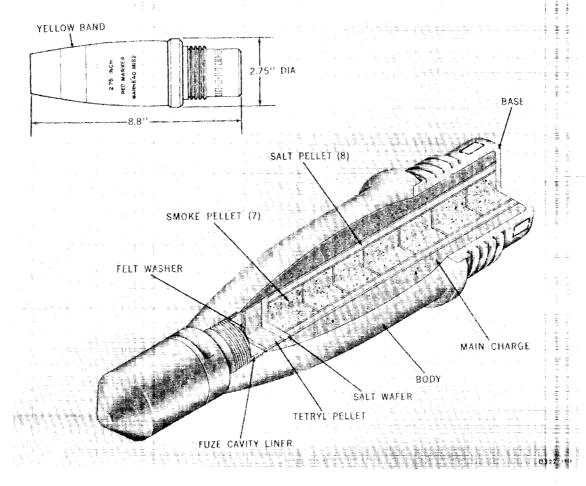
DISPOSAL:

Detonate

GENERAL INFORMATION:

The M158 is used for spotting and is a bursting

type warhead.



WARHEAD, SMOKE, 2.75 INCH, XM152

AGENT/FILLER: Red Smoke and HE

WEIGHT OF AGENT/FILLER: 1.3 1bs

, ----

DIMENSIONS: 8.8 inches long; 2.75 inches diameter

WEIGHT: 6.0 lbs

FUZE: PD

HAZARDS: High Explosive, Burning and Fragmentation

COLOR CODE: NEW: Light green body with one yellow band and all

markings in black, with three red CCC above

the yellow band.

DISPOSAL: Detonate

GENERAL INFORMATION: The XM152 warhead is used for spotting and is

a bursting type warhead.

WARHEAD, SMOKE, 2.75 INCH, XM153

AGENT/FILLER: Ye

Yellow Smoke and HE

WEIGHT OF AGENT/FILLER:

1.3 lbs

DIMENSIONS:

8.8 inches long; 2.75 inches diameter

WEIGHT:

6.0 lbs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: NEW:

Light green body with one yellow band and all markings in black with three yellow CCC above

the yellow band.

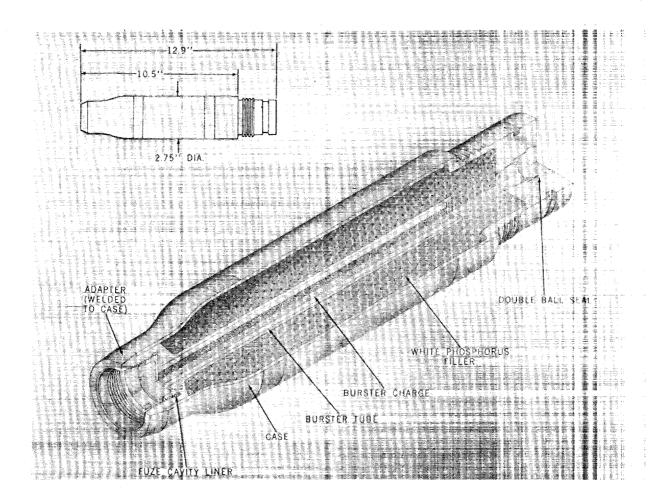
DISPOSAL:

Detonate

GENERAL INFORMATION:

The XM153 warhead is used for spotting, and is a

bursting type warhead.



WARHEAD, SMOKE, 2.75 INCH, MK67 MOD-O

AGENT/FILLER: WP

WEIGHT OF AGENT/FILLER: 2.7 1bs

DIMENSIONS: 12.9 inches long; 2.75 inches diameter

WEIGHT: 4.5 lbs

FUZE: PD

HAZARDS: High Explosive, Burning and Fragmentation

COLOR CODE: NEW: Light green body with one yellow band and all

markings in light green.

DISPOSAL: Detonate

GENERAL INFORMATION: The MK67 warhead is used by the Navy for marking

ground targets and is a bursting type warhead.

ROCKET, SMOKE, 2.75/3.5 INCH, MODIFIED

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 2.23 1bs

DIMENSIONS:

58.5 inches long; 3.5 inches diameter

WEIGHT:

19.7 lbs

FUZE:

Impact

HAZARDS:

High Explosive, Burning, Fragmentation

COLOR CODE: NEW:

Light green body with one yellow band, with all

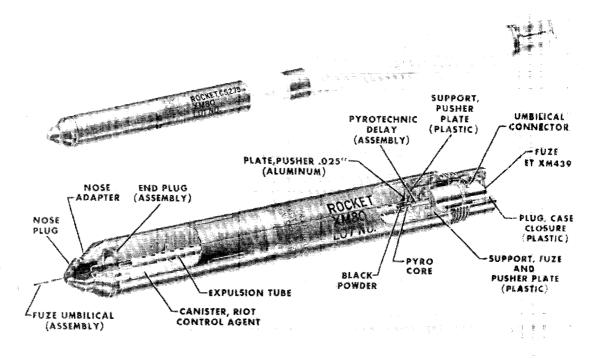
markings in light red.

DISPOSAL:

Detonate

GENERAL INFORMATION:

The 2.75/3.5 inch rocket is a modified rocket made up of the warhead and fuze of the M30 3.5 inch WP rocket, an aluminum adapter, and an MK40 2.75 inch rocket motor.



ROCKET, RIOT, 2.75 INCH, FFAR, XM99

AGENT/FILLER:

CS Pyrotechnic Mixture

WEIGHT OF AGENT/FILLER: 40 oz

DIMENSIONS:

64.0 inches long; 2.75 inches diameter

WEIGHT:

18 1bs

FUZE:

Acceleration, deceleration and time

HAZARDS:

High Explosive, Burning, Agent, Fragmentation

COLOR CODE: NEW:

Gray body with one brown band, one red band,

and all markings in red.

DISPOSAL:

Burn

GENERAL INFORMATION:

The XM99 2.75 inch FFAR rocket is used to provide stand off for fixed and rotary winged aircraft. The warhead is opened in the air over the target area and releases the small CS filled submunitions.

WARHEAD, SMOKE, 5-INCH, MK4 MOD-0

AGENT/FILLER:

PWP

WEIGHT OF AGENT/FILLER: 19.30 1bs

DIMENSIONS:

34.0 inches long; 5.0 inches diameter

WEIGHT:

26.7 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

markings in light red.

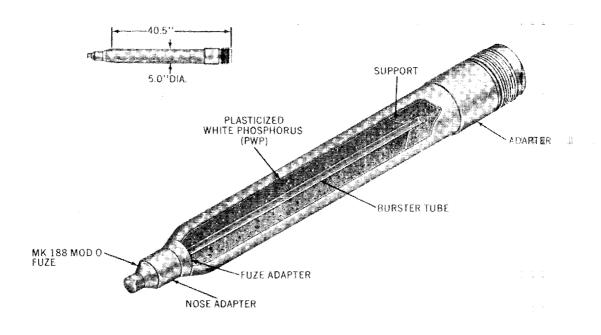
DISPOSAL:

Detonate

GENERAL INFORMATION:

The MK4 rocket warhead is used for spotting and

screening, and is a bursting type warhead.



WARHEAD, SMOKE, 5-INCH, MK34 MOD-0

AGENT/FILLER:

PWP

WEIGHT OF AGENT/FILLER:

19.3 lbs

DIMENSIONS:

40.5 inches long; 5 inches diameter

WEIGHT:

52 1bs

FUZE:

PD

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with one yellow band and all

markings in light red.

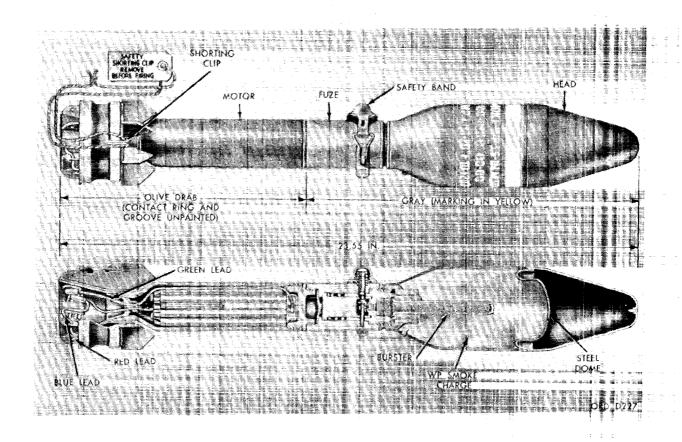
DISPOSAL:

Detonate

GENERAL INFORMATION:

The MK34 warhead is used for spotting and screening,

and is a bursting type warhead.



ROCKET, SMOKE, 3.5 INCH, M30

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 2.23 1bs

DIMENSIONS:

23.6 inches long; 3.5 inches diameter

WEIGHT:

9.0 lbs

FUZE:

Impact

HAZARDS:

High Explosive, Burning and Fragmentation

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow, with an OD rocket motor.

NEW:

Light green body with one yellow band and all markings in light red, with an OD rocket motor.

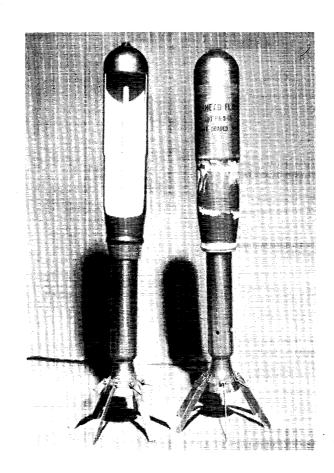
DISPOSAL:

Detonate

GENERAL INFORMATION:

The M30 3.5 inch rocket is used for spotting, screening and antipersonnel, and has a bursting

type warhead.



ROCKET, INCENDIARY, 66mm, M74

AGENT/FILLER: TPA

WEIGHT OF AGENT/FILLER: 1.3 1bs

DIMENSIONS: 21 inches long; 2.5 inches diameter

WEIGHT: 3 1bs

FUZE: M434 Impact

HAZARDS: High Explosive and Burning

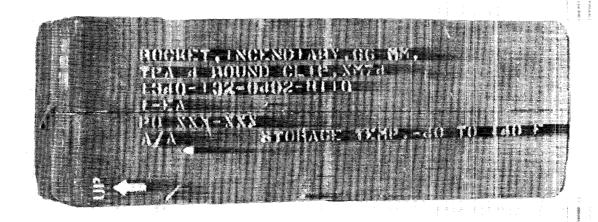
COLOR CODE: NEW: Red body with one yellow band and all markings

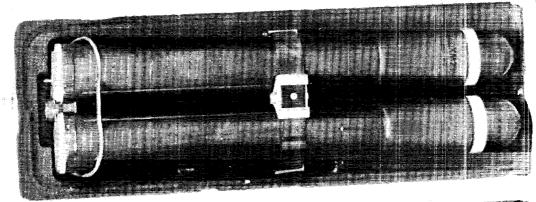
in black.

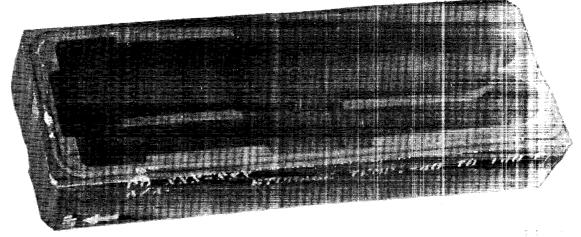
DISPOSAL: Detonate

GENERAL INFORMATION: The M74 flame rocket is fired from the M202 rocket

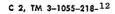
launcher which contains a 4-round clip. The M74 warhead is filled with TPA which will ignite on contact with air and explode on contact with water.

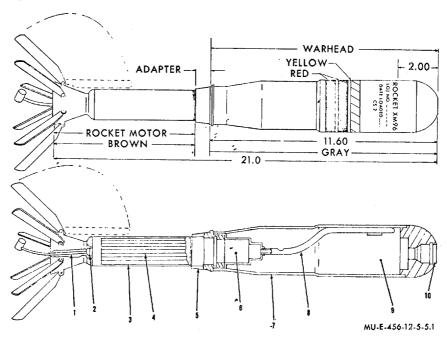






ROCKET, INCENDIARY, 66mm, TPA, 4-ROUND CLIP, XM74





- Flash tube
- Integral igniter Rocket motor, M54
- Propellant grains Adapter

- Fuze, XM434 Warhead, XM244 Burster, linear-
- shaped charge
- 9 Riot control agent, CS2 Valve assembly

ROCKET, RIOT, 66mm, XM96

AGENT/FILLER:

CS-2

WEIGHT OF AGENT/FILLER: 8 oz of agent and 150 PSIG of Nitrogen

DIMENSIONS:

21.0 inches long; 2.5 inches diameter

WEIGHT:

3 1bs

FUZE:

Impact

HAZARDS:

DISPOSAL:

High Explosive, Agent and Pressure

COLOR CODE: NEW:

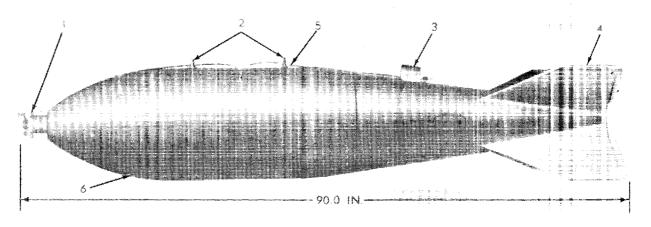
Gray body with two red bands, one yellow band, and all markings in red, with a brown rocket motor.

Detonate

GENERAL INFORMATION:

The XM96 Rocket has a bursting type warhead and is

used for riot control.



ORD 01149

BOMB, GAS, NONPERSISTENT, 750 LBS, MC-1

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER:

220 1bs; 24 gal

DIMENSIONS:

90 inches long; 16 inches diameter

WEIGHT:

725 1bs

FUZE:

M904 Nose Impact

HAZARDS:

Agent, High Explosive, and Fragmentation

COLOR CODE: OLD:

Gray body with one green band with all markings

in green.

NEW:

Gray body with three green bands with all markings

in green and one yellow band.

DISPOSAL: WARTIME:

Vent and Burn

PEACETIME:

Vent and Neutralize

GENERAL INFORMATION:

The MC-1 GB gas bomb is a modified M117 750 1b demo bomb which contains a 15-1b full length explosive

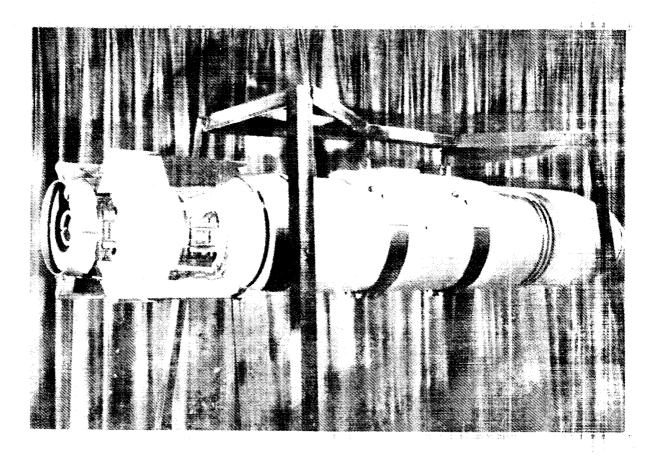
burster.

3 3 6 6 7 15 14 13 12 11 ORD D1150

185

GAS,

750 LB, MC-1 (CUTAWAY)



BOMB, GAS, 500 LB, MK 116 MOD-0 (WETEYE)

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER: 349.8 1bs

DIMENSIONS:

7.8 feet long; 14.0 inches diameter

WEIGHT:

562 1bs

FUZE:

Nose Impact

HAZARDS:

Agent, High Explosive, Mechanical (fins) and

Fragmentation

COLOR CODE: NEW:

Gray body with three green bands and one yellow

band with all markings in green.

DISPOSAL: WARTIME:

Vent and Burn

PEACETIME:

Vent and Neutralize

GENERAL INFORMATION:

The MK116 500 lb gas bomb is a light weight aluminum body with a full length burster and spring-loaded $\,$

tail fins.

BOMB, GAS, NONPERSISTENT, 500 LB, MK94, MOD-0

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER: 108.0 1bs

DIMENSIONS:

88.8 inches long; 10.8 inches diameter

WEIGHT:

441.0 lbs

FUZE:

M904 nose fuze impact

HAZARDS:

Agent, High Explosive and Fragmentation

COLOR CODE: NEW:

Gray body with three green bands and one yellow

band, with all markings in green.

DISPOSAL: WARTIME:

Vent and Burn

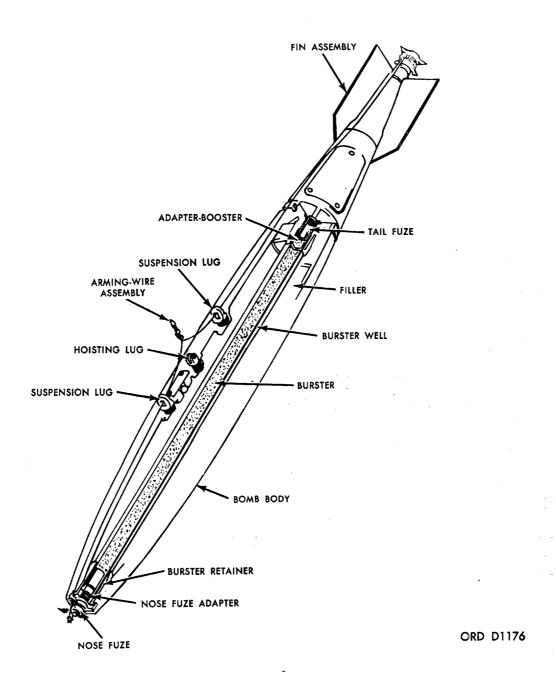
PEACETIME:

Vent and Neutralize

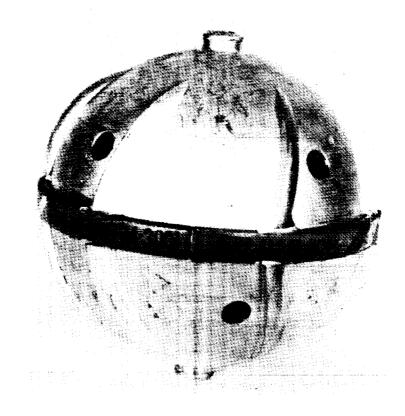
GENERAL INFORMATION:

The MK94 is a modified MK82 500-1b general purpose low drag bomb which has been modified to hold a 16-1b

explosive burster and agent GB.



BOMB, GAS, NONPERSISTENT, GB, 500-LB, MK94 MOD-0



BOMB, GAS, NONPERSISTENT, M139

AGENT/FILLER:

GB

WEIGHT OF AGENT/FILLER:

1.3 1bs

DIMENSIONS:

4.5 inches diameter

WEIGHT:

2.5 lbs

FUZE:

XM912 Allways Acting Impact

HAZARDS:

Agent and High Explosive

COLOR CODE: NEW:

Aluminum body with a gray band printed with three green bands, one yellow band, and all markings in

green.

DISPOSAL:

Open and Neutralize

GENERAL INFORMATION:

The M139 GB gas bomb is a bursting type which is

used in the M190 rocket warhead and the M212

guided missile warhead.

BOMB, CHEMICAL WARFARE, 500 LB, BLU 52/B

AGENT/FILLER:

CS-1

WEIGHT OF AGENT/FILLER: 117.7 Kg

DIMENSIONS:

129.9 inches long; 18.5 inches diameter

WEIGHT:

345 1bs

FUZE:

None

HAZARDS:

Agent

COLOR CODE: NEW: OD body with three gray bands and one red band

over the gray bands.

OLD:

OD body with one red band at each end.

DISPOSAL:

Burn

GENERAL INFORMATION:

The BLU 52/B chemical warfare bomb is a modified BLU 1C/B fire bomb containing CS-1 riot control agent. The bomb contains no fuze or explosive parts, and the bomb may also be fitted with fins. 191

MARKINGS FOR BOMB, CHEMICAL WARFARE, BLU-52/B

BOMB, CHEMICAL WARFARE, 500 LB, BLU 52A/B

AGENT/FILLER:

CS-2

WEIGHT OF AGENT/FILLER: 117.7 KG

DIMENSIONS:

129.9 inches long; 18.5 inches diameter

WEIGHT:

345 1bs

FUZE:

None

HAZARDS:

Agent

COLOR CODE:

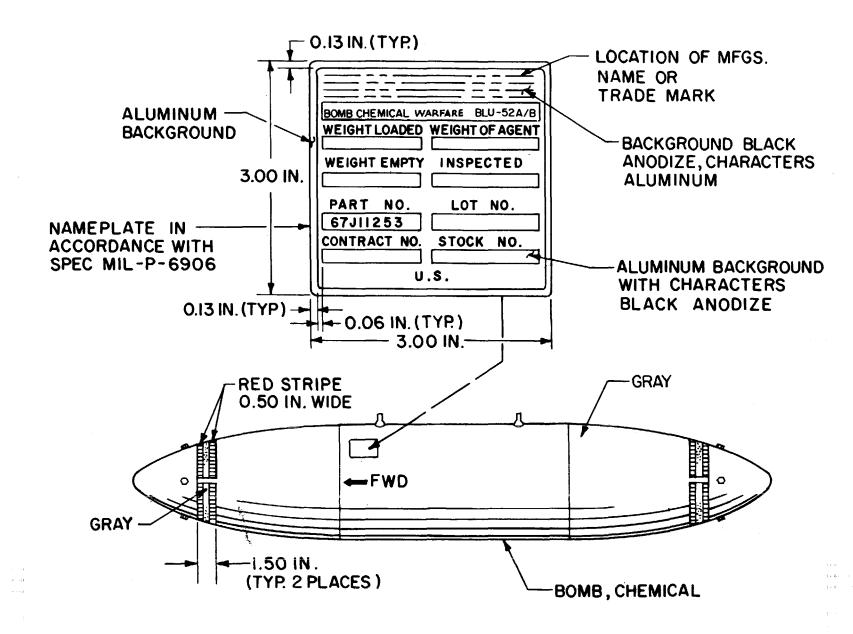
Gray body with two red bands at each end.

DISPOSAL:

Burn

GENERAL INFORMATION:

The BLU 52A/B chemical warfare bomb is a modified BLU 1C/B fire bomb containing CS-2 riot control agent. The bomb contains no fuze or explosive parts, and the bomb may also be fitted with fins.



MARKINGS FOR BOMB, CHEMICAL WARFARE, BLU-52A/B

FUZE AND BURSTER BOMB, SYSTEM, M925

AGENT/FILLER:

CS-1, CS-2

WEIGHT OF AGENT/FILLER:

10 each 8-1b paper bags of agent; 80 1bs of agent

DIMENSIONS:

Standard 55-gal steel drum

WEIGHT:

235 1bs

FUZE:

M923 Bomb fuze

HAZARDS:

Agent and High Explosive

COLOR CODE: OLD:

Gray 55-gal drum with one red band and all

markings in red.

NEW:

Gray 55-gal drum with two red bands with all

markings in red.

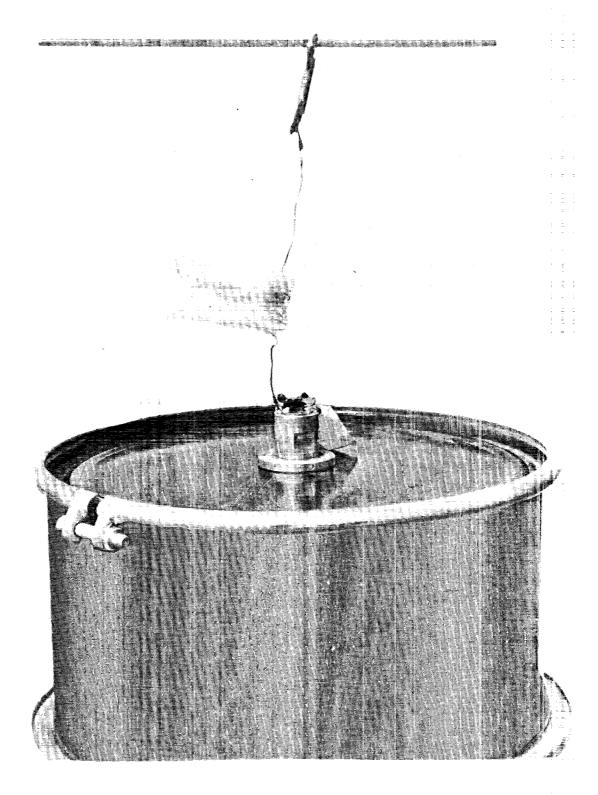
DISPOSAL:

Burn

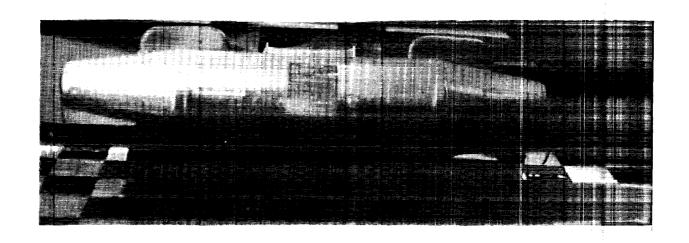
GENERAL INFORMATION:

The M925 drum system consists of a 55-gal drum filled with 10 each 8-1b paper bags of CS-1 or CS-2 powder, and an M923 bomb fuze and M55 explosive burster. Upon impact, the fuze fires

the burster which bursts the drum and disperses the CS.



FUZE AND BURSTER, BOMB, SYSTEM, M925



BOMB, FIRE, 250 LB, BLU 10/B

AGENT/FILLER: NP

WEIGHT OF AGENT/FILLER: 211.0 1bs; 33.0 gal

DIMENSIONS: 88.0 inches long; 12.5 inches diameter

WEIGHT: 250.0 1bs

FUZE: M23 Igniter with FMU-7 fuze

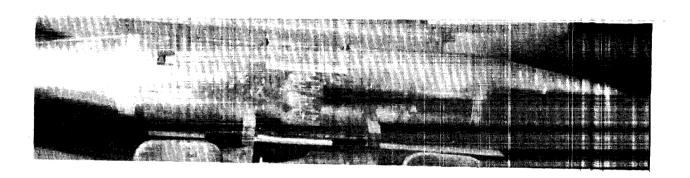
HAZARDS: Burning, High Explosive (with igniter)

COLOR CODE: NEW: Aluminum body with red and white markings.

DISPOSAL: Burn

GENERAL INFORMATION: The BLU-10/B fire bomb is filled in the field.

Only the igniter contains an explosive burster



BOMB, FIRE, 500 LB, BLU 23/B

AGENT/FILLER:

NP

WEIGHT OF AGENT/FILLER: 430.0 lbs; 67.0 gal

DIMENSIONS:

119.0 inches long; 15.75 inches diameter

WEIGHT:

490.0 lbs

FUZE:

M23 Igniter with FMU-7 fuze

HAZARDS:

Burning and High Explosive with Igniter

COLOR CODE: NEW:

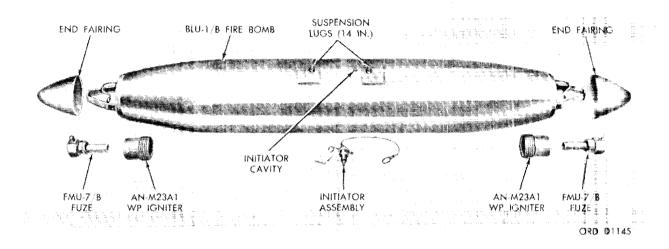
Aluminum body with red and white markings

DISPOSAL:

Burn

GENERAL INFORMATION:

The BLU-23/B fire bomb is filled in the field. Only the igniter contains an explosive burster



BOMB, FIRE, 750 LB, BLU 1/B

AGENT/FILLER:

NP

WEIGHT OF AGENT/FILLER:

615-790 lbs; 90-100 gal

DIMENSIONS:

130.0 inches long; 18.5 inches diameter

WEIGHT:

697-837 1bs

FUZE:

M23 Igniter with FMU-7 Fuze

HAZARDS:

Burning and High Explosive with Igniter

COLOR CODE: NEW:

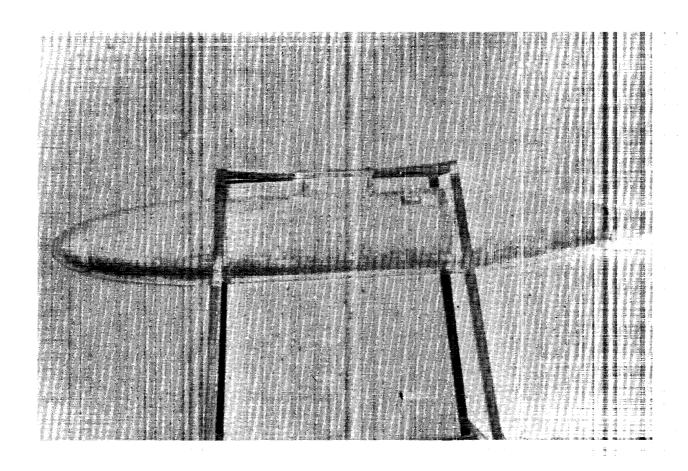
Aluminum body with red and white markings.

DISPOSAL:

Burn

GENERAL INFORMATION:

The BLU-1/B fire bomb is filled in the field. Only the igniter contains an explosive burster



BOMB, FIRE, 500 LB, BLU 32/B

AGENT/FILLER: NP-B

WEIGHT OF AGENT/FILLER: 529.0 lbs; 67.0 gal

DIMENSIONS: 119.0 inches long; 15.75 inches diameter

WEIGHT: 589.0 1bs

FUZE: M23 Igniter with FMU-7 fuze

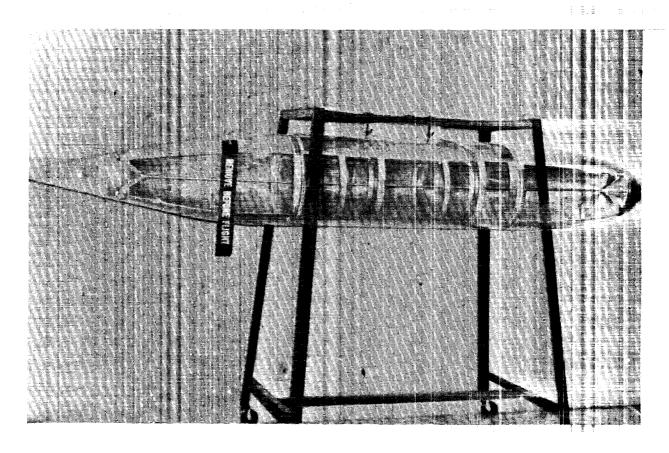
HAZARDS: Burning and High Explosive with Igniter

COLOR CODE: NEW: Aluminum body with red and white markings.

DISPOSAL: Burn

GENERAL INFORMATION: The BLU-32/B fire bomb is the same as the BLU-23/B

except that it is pre-filled at the factory. Only the igniter contains an explosive burster



BOMB, FIRE, 750 LB, BLU 27/B

AGENT/FILLER: NP-B

WEIGHT OF AGENT/FILLER: 790.0 lbs; 100.0 gal

DIMENSIONS: 130.0 inches long; 18.5 inches diameter

WEIGHT: 873.0 lbs

FUZE: M23 Igniter with FMU-7 fuze

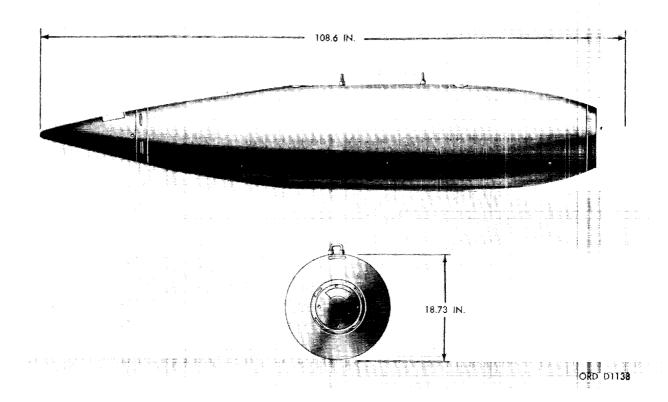
HAZARDS: Burning and High Explosive with Igniter

COLOR CODE: NEW: Aluminum body with red and white markings.

DISPOSAL: Burn

GENERAL INFORMATION: The BLU-27/B fire bomb is the same as the BLU-1/B

except that it is pre-filled at the factory. Only the igniter contains an explosive burster



BOMB, FIRE 500 LB, MK 77 MOD-1

AGENT/FILLER: NP

WEIGHT OF AGENT/FILLER: 450.0 lbs; 75.0 gal

DIMENSIONS: 108.6 inches long; 18.73 inches diameter

WEIGHT: 520.0 1bs

FUZE: M23, M15, M16 Igniter with impact fuze

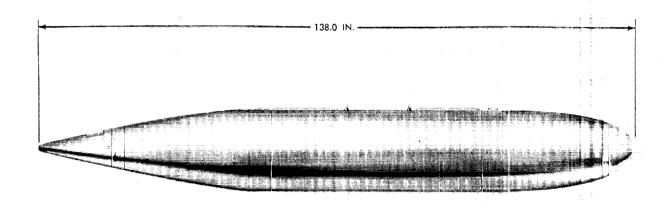
HAZARDS: Burning and High Explosive with Igniter

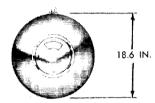
COLOR CODE: NEW: Aluminum body with markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The MK 77 MOD-1 fire bomb is filled in the field.

Only the igniter contains an explosive burster





ORD D1134

BOMB, FIRE, 750 LB, MK 77 MOD-0

AGENT/FILLER:

NP

WEIGHT OF AGENT/FILLER: 668.0 lbs; 110.0 gal

DIMENSIONS:

138.0 inches long; 18.6 inches diameter

WEIGHT:

760.0 lbs

FUZE:

M23, M15, M16 Igniter with impact fuze

HAZARDS:

Burning and High Explosive with Igniter

COLOR CODE: NEW:

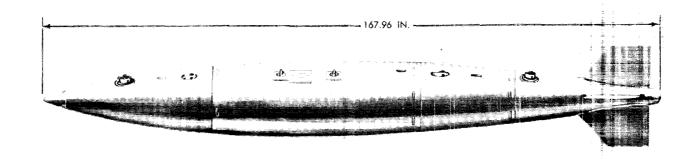
Aluminum body with markings in black.

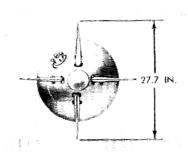
DISPOSAL:

Burn

GENERAL INFORMATION:

The MK 77 MOD-0 fire bomb is filled in the field. Only the igniter contains an explosive burster





ORD D1142

BOMB, FIRE, 1000 LB, MK 79 MOD-1

AGENT/FILLER: NP

WEIGHT OF AGENT/FILLER: 700.0 1bs; 112.0 gal

DIMENSIONS: 167.96 inches long; 19.6 inches diameter

WEIGHT: 975.0 1bs

FUZE: M23 Igniter with M173 fuze

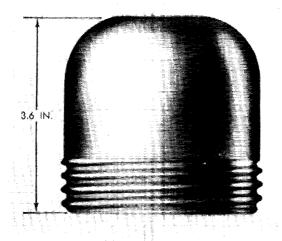
HAZARDS: Burning and High Explosive with Igniter

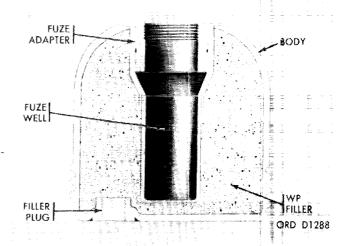
COLOR CODE: NEW: Aluminum body with markings in black.

DISPOSAL: Burn

GENERAL INFORMATION: The MK 79 MOD-1 fire bomb is filled in the field.

Only the M23 igniter contains an explosive burster





IGNITER, BOMB, M23/AN-M23A1

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER:

1.25 lbs

DIMENSIONS:

3.6 inches high; 3.85 inches diameter

WEIGHT:

3.25 lbs

FUZE:

M173 or FMU-7

HAZARDS:

Burning

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

NEW:

Light green body with all markings in red. (NOTE: The igniter does not have a burster;

the burster is part of the fuze.)

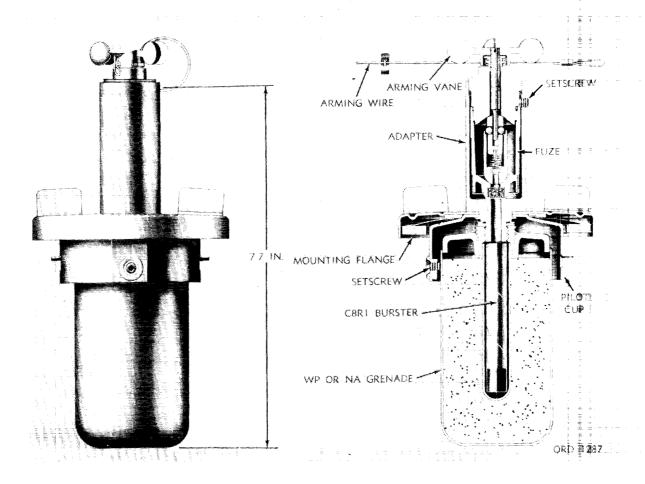
DISPOSAL:

Detonate

GENERAL INFORMATION:

The M23 Igniter is used with most U. S. fire bombs as the means of igniting the fuel. The igniter is

opened by a small burster in the fuze.



IGNITER, BOMB, AN-M16

AGENT/FILLER:

WP or Na

WEIGHT OF AGENT/FILLER:

WP - 0.95 lbs; Na - 0.5 lbs

DIMENSIONS:

7.7 inches high; 2.38 inches diameter

WEIGHT:

WP - 3.68 lbs; Na - 3.26 lbs

FUZE:

M157 Impact

HAZARDS:

High Explosive and Burning

COLOR CODE: OLD:

Gray body with one yellow band and all markings

in yellow.

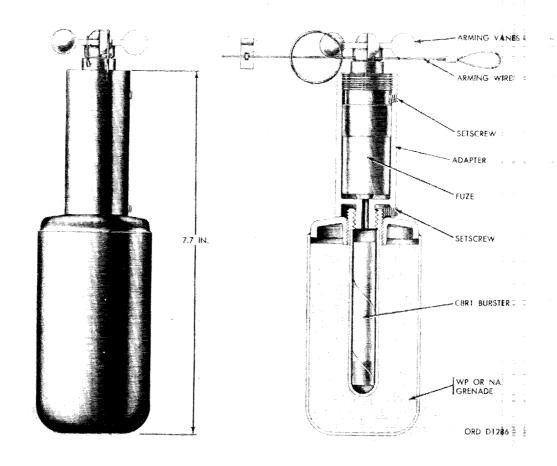
DISPOSAL:

Detonate.

GENERAL INFORMATION:

The AN-M16 igniter is used in the jettison-type aircraft fuel tank for use as a fire bomb. The body of the igniter is an M15 grenade with a bomb

type fuze which is filled with WP or Na.



IGNITER, BOMB, AN-M15

AGENT/FILLER: WP or Na

WEIGHT OF AGENT/FILLER: WP - 15 oz; Na - 8 oz

DIMENSIONS: 7.7 inches high; 2.38 inches diameter

WEIGHT: WP - 3.68 lbs; Na - 3.26 lbs

FUZE: M157 Impact

HAZARDS: High Explosive and Burning

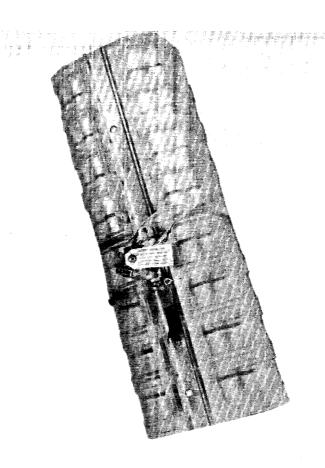
COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

DISPOSAL: Detonate

GENERAL INFORMATION: The AN-M15 Igniter is used with jettison-type fuel

tanks so that they can be used as fire bombs.



TACTICAL, CANISTER, CLUSTER, 50 LB, E158

AGENT/FILLER:

CS

WEIGHT OF AGENT/FILLER: 20.5 1bs

DIMENSIONS:

27.0 inches long; 10.2 inches high; 10.28 inches

wide

WEIGHT:

47 1bs

FUZE:

E63R1 MT

HAZARDS:

Burning and Agent, Separation

COLOR CODE: NEW:

Clear plastic modules which contain the aluminum

sub-munitions which have one red band and all

markings in red.

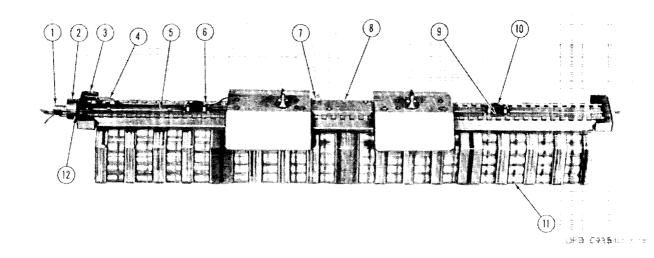
DISPOSAL:

Burn or Detonate

GENERAL INFORMATION:

The E158 cluster has eight (8) clear plastic modules each of which contains 33 BLU-39/B

tactical CS canisters.



TACTICAL, CANISTER, CLUSTER, 130 LB, E159

AGENT/FILLER: CS

WEIGHT OF AGENT/FILLER: 41.0 1bs

DIMENSIONS: 62.46 inches long; 10.2 inches high; 10.28 inches

wide

WEIGHT: 130 1bs

FUZE: E63R1 MT 2 each

HAZARDS: Burning and Agent, Separation

COLOR CODE: NEW: Clear plastic modules which contain the aluminum

sub-munitions which have one red band and all

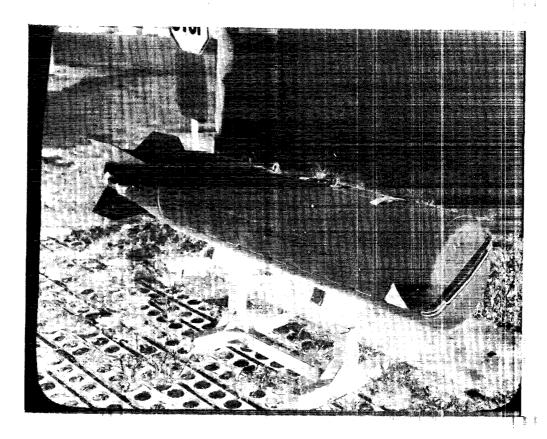
markings in red.

DISPOSAL: Burn or Detonate

GENERAL INFORMATION: The E159 cluster has an aluminum strong back, which

has two (2) E158 clusters attached to it by an

explosive bolt.



CLUSTER, INCENDIARY, BOMB, 750 LB, M36

AGENT/FILLER: TH-3

WEIGHT OF AGENT/FILLER: 182 M126 bomblets

DIMENSIONS: 90 inches long; 16 inches diameter

WEIGHT: 900 lbs

FUZE: M152 MT 2 each

HAZARDS: Burning and High Explosive

COLOR CODE: OLD: Gray body with one purple band and all markings

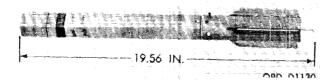
in purple.

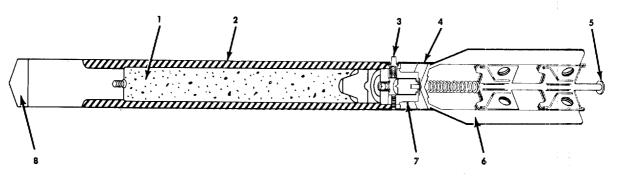
NEW: OD body with red and black markings.

DISPOSAL: Burn

GENERAL INFORMATION: The M36 750-1b incendiary cluster is filled with

182 M126 4-1b incendiary bombs. The cluster is a side opening type which uses 2 MT tail fuzes.





ORD D1175

BOMB, INCENDIARY, 4 LB, M126

AGENT/FILLER:

TH-3, MG

WEIGHT OF AGENT/FILLER:

0.63 lbs

DIMENSIONS:

19.56 inches long; 1.62 inches diameter (hexagonal)

WEIGHT:

3.6 1bs

FUZE:

M15 Impact

HAZARDS:

Burning

COLOR CODE: OLD:

MG body with all markings in purple.

NEW:

OD fin assembly with red markings on magnesium

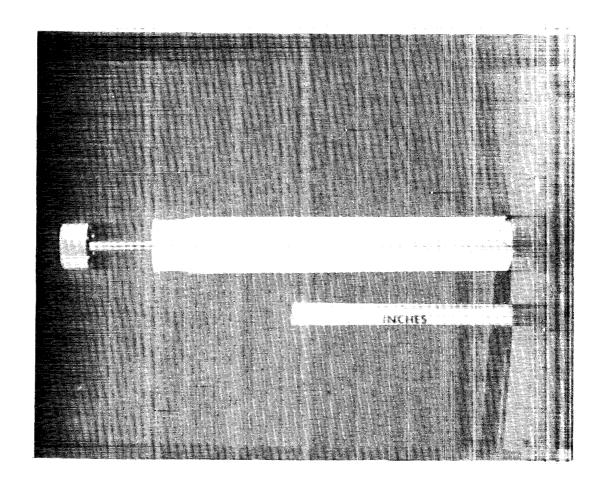
body and one red band.

DISPOSAL:

Burn

GENERAL INFORMATION:

The M126 4-1b incendiary bomb consists of a steel nose and a magnesium body which is filled with TH-3, and a pop-out fin assembly. The bomb is loaded in the M36 incendiary cluster.



BOMB, INCENDIARY, 10 LB, M74A1

AGENT/FILLER:

PT-1, WP

WEIGHT OF AGENT/FILLER: 2.75 lbs; PT-1 6 oz WP

DIMENSIONS:

19.5 inches long; 2.8 inches hexagonal

WEIGHT:

8.5 1bs

FUZE:

M197 Impact

HAZARDS:

Burning and Ejection

COLOR CODE: OLD:

Gray body with one purple band and all markings

in purple.

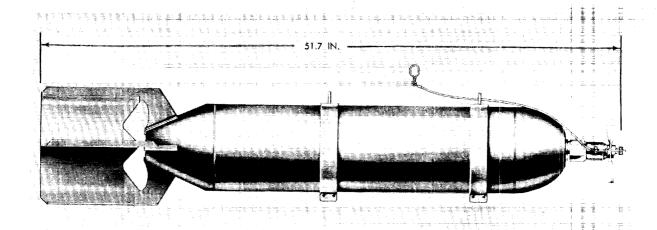
DISPOSAL:

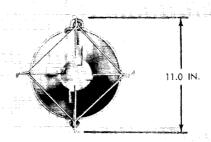
Burn or Detonate

GENERAL INFORMATION:

The M74Al is a 10-1b incendiary bomb which is loaded

in the M35 incendiary bomb cluster.





ORD. D.1127

BOMB, SMOKE, 100 LB, AN-M47A4

AGENT/FILLER: WP or PWP

WEIGHT OF AGENT/FILLER: 74 1bs

DIMENSIONS: 52.9 inches long; 8.0 inches diameter

WEIGHT: 105 1bs

FUZE: Nose Impact

HAZARDS: High Explosive, Fragmentation and Burning

COLOR CODE: OLD: Gray body with one yellow band and all markings

in yellow.

NEW: Light green body with one yellow band and all

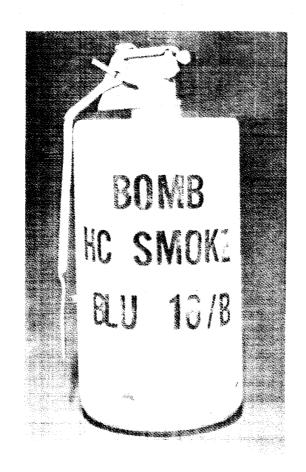
markings in red.

DISPOSAL: Detonate

GENERAL INFORMATION: The AN-M47A4 smoke bomb is a light case bomb

which has a full length explosive burster and a nose impact fuze only. The bomb is used for

screening and incendiary use.



BOMB, SMOKE, BLU 16/B

AGENT/FILLER: HC Smoke Mixture

WEIGHT OF AGENT/FILLER: .91 KG

DIMENSIONS: 5.7 inches long; 2.60 inches diameter

WEIGHT: 2.7 lbs

FUZE: Modified M201, 8 to 12 second delay

HAZARDS: Burning

COLOR CODE: Light green body with all markings in black

and a white top.

DISPOSAL: Burn

GENERAL INFORMATION: The BLU 16/B smoke bomb is dropped from the

SUU 7B/A dispenser to provide screening smoke

from a high speed aircraft.

BOMB, SMOKE, BLU-17/B

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 1.0 1bs

DIMENSIONS:

4.7 inches high; 2.6 inches diameter

WEIGHT:

5.0 1bs

FUZE:

Time delay 8 to 12 seconds

HAZARDS:

High Explosive, Fragmentation and Burning

COLOR CODE: NEW:

Light green body with all markings in red.

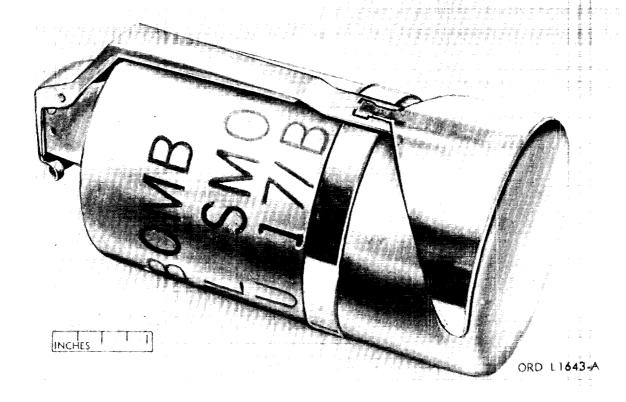
DISPOSAL:

Detonate

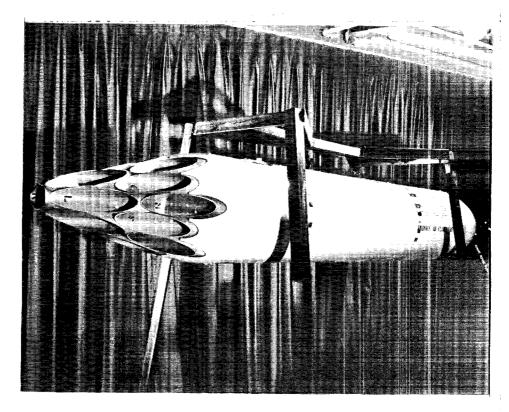
GENERAL INFORMATION:

The BLU-17/B is a small WP filled bomb that looks something like the M15 WP smoke grenade. It is dropped from the SUU-14 or SUU-7 dispensers and is used for smoke screening.

1 # 1



BOMB, SMOKE, BLU-17/B



DISPENSER, BOMB, AIRCRAFT, SUU-7A/A

AGENT/FILLER:

WP or HC

WEIGHT OF AGENT:

WP - 1.1 1bs per BLU-17/B; HC - .91 Kg per BLU-16/B

DIMENSIONS:

118.8 inches long; 15.6 inches diameter

WEIGHT:

Empty - 122 1bs

Loaded w/261 BLU-17/B - 692.2 1bs Loaded w/261 BLU-16/B - 826.7 1bs

FUZE:

Electric fired

HAZARDS:

Munition

COLOR CODE: NEW:

White body with one yellow band and all markings

in black.

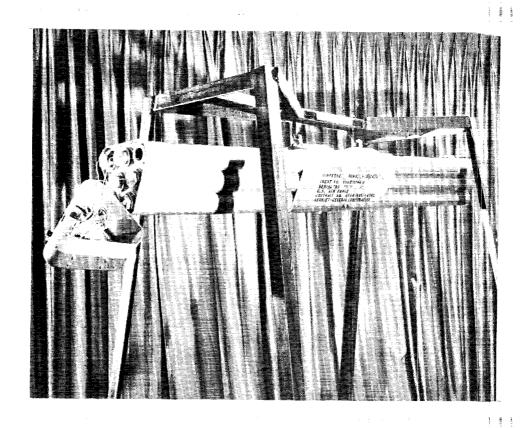
DISPOSAL:

Detonate BLU-17/B; Burn BLU-16/B

GENERAL INFORMATION:

The SUU-7A/A is a ram air type dispenser, which is fired by exploding the explosive detent at the rear of each tube which will allow the ram air to force the munition out the rear of the tubes. The dispenser has 19 tubes and is used on high speed aircraft, and is loaded with BLU-17/B,

BLU-16/B or a combination of each.



DISPENSER, BOMB, AIRCRAFT, SUU-14/A

AGENT/FILLER:

WP

WEIGHT OF AGENT/FILLER: 1.1 1bs per BLU-17/B

DIMENSIONS:

81.31 inches long; 8.50 inches high; 9.38 inches

wide

WEIGHT:

Empty - 50 1bs; Loaded - 225 1bs

FUZE:

Electric fired

HAZARDS:

Gas cartridges, Munition, Ejection

COLOR CODE: NEW:

Aluminum body with one light green band with a light red WP and a yellow band; all other markings

in black.

DISPOSAL:

Detonate BLU-17/B; Burn gas cartridges

GENERAL INFORMATION:

The SUU-14/A dispenser is a six-tube dispenser which is electrically fired and is used on low speed aircraft. The SUU-14/A dispenser is only loaded with BLU-17/B bomblets for chemical use.

TANK, SPRAY, CHEMICAL, TMU-28/B

AGENT/FILLER:

VX

WEIGHT OF AGENT:

165 gallons

DIMENSIONS:

15.0 feet long; 22.5 inches diameter

WEIGHT:

1,966 lbs

FUZE:

Electrically fired explosive cutters

HAZARDS:

Agent and High Explosive

COLOR CODE: NEW:

Aluminum body with a gray decal which has three

green bands and all markings in green.

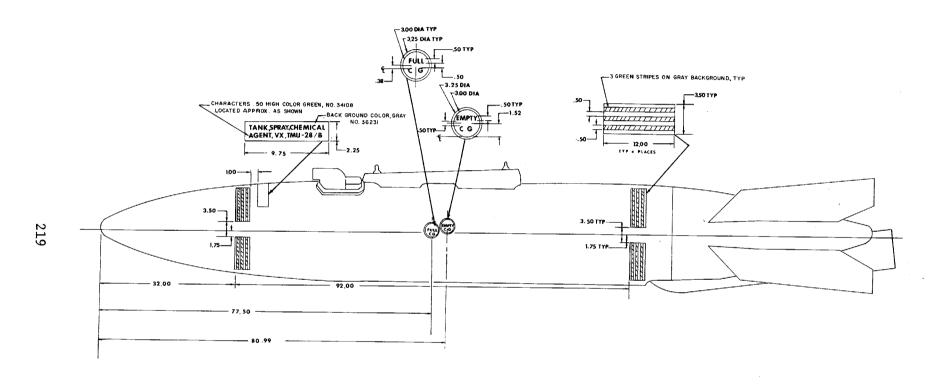
DISPOSAL:

Vent and Neutralize

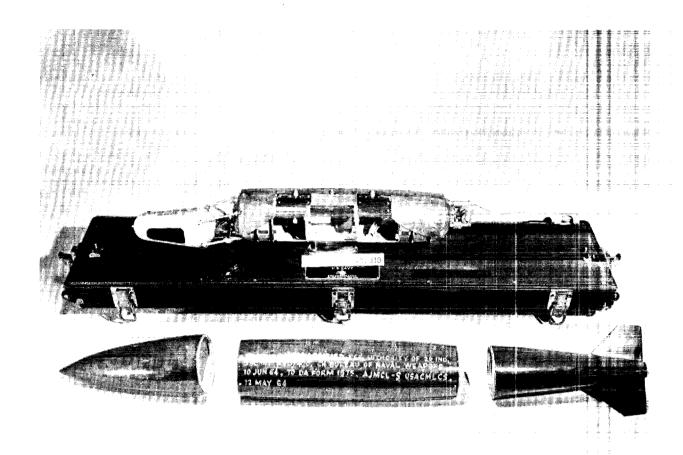
GENERAL INFORMATION:

The TMU-28/B is a ram air spray tank which is filled with VX. When the explosive cutters are fired, ram air will force the agent out of the spray boom

at a rate of 20 gallons a second.



MARKINGS - LIQUID AGENT SPRAY TANK



TANK, SPRAY, CHEMICAL, AERO-14/B

AGENT/FILLER: Any liquid chemical (pre-stocks are VX filled)

WEIGHT OF AGENT/FILLER: 90 gallons

DIMENSIONS: 1,400 - 2,000 lbs

FUZE: None (Electric waves)

HAZARDS: High Pressure Air and Agent

COLOR CODE: NEW: Aluminum body with markings in proper color for

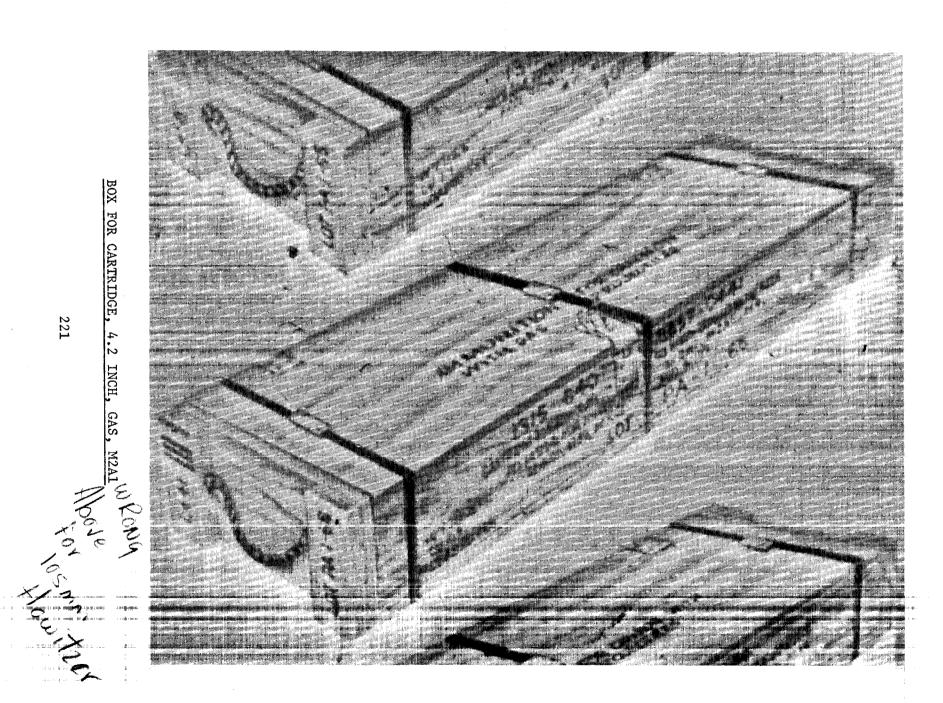
agent.

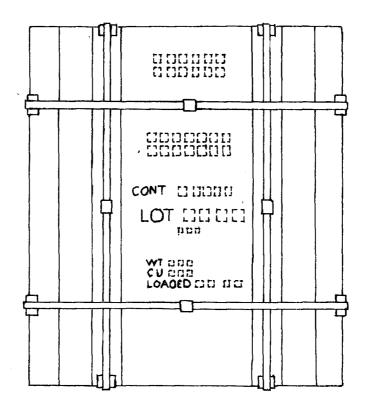
DISPOSAL: Vent and neutralize

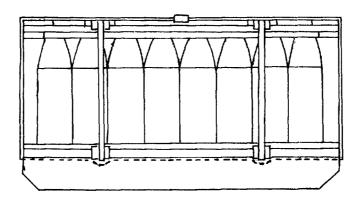
GENERAL INFORMATION: The AERO-14/B spray tank is used to deploy liquid

chemical agents and is a high pressure type of

spray tank which is used by the USMC.

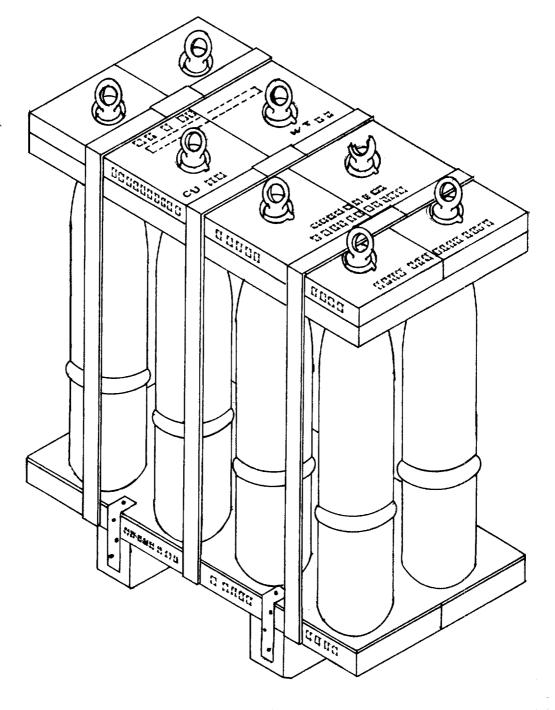


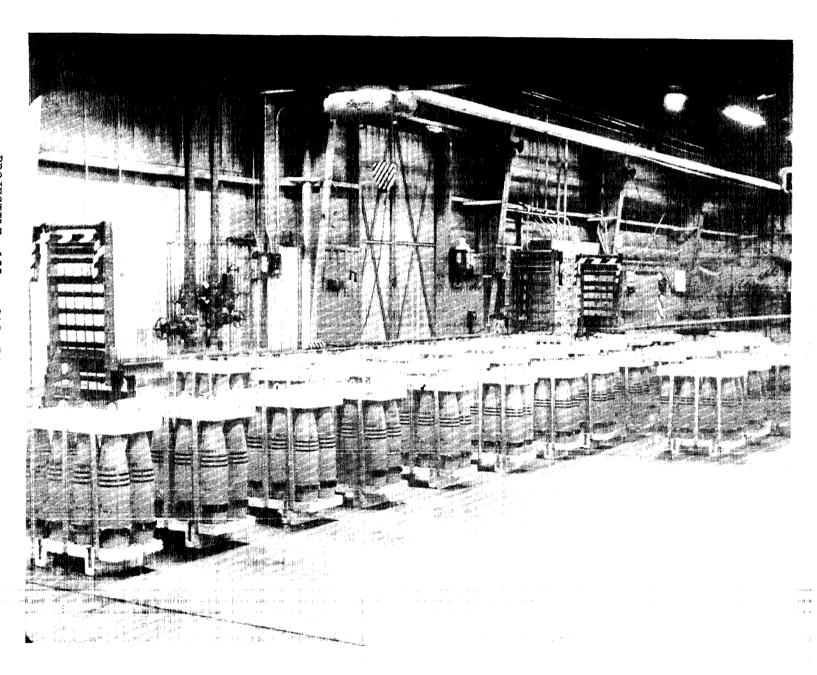




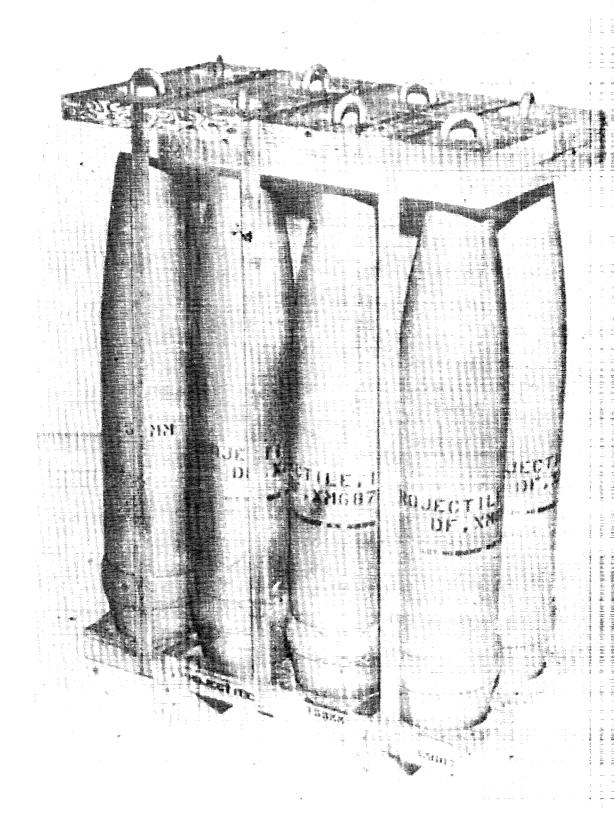
BOX FOR CARTRIDGE, 105mm, GAS, M360, M60

CARTRIDGE, GAS, 105mm, PALLETIZED WITH OVERPACK

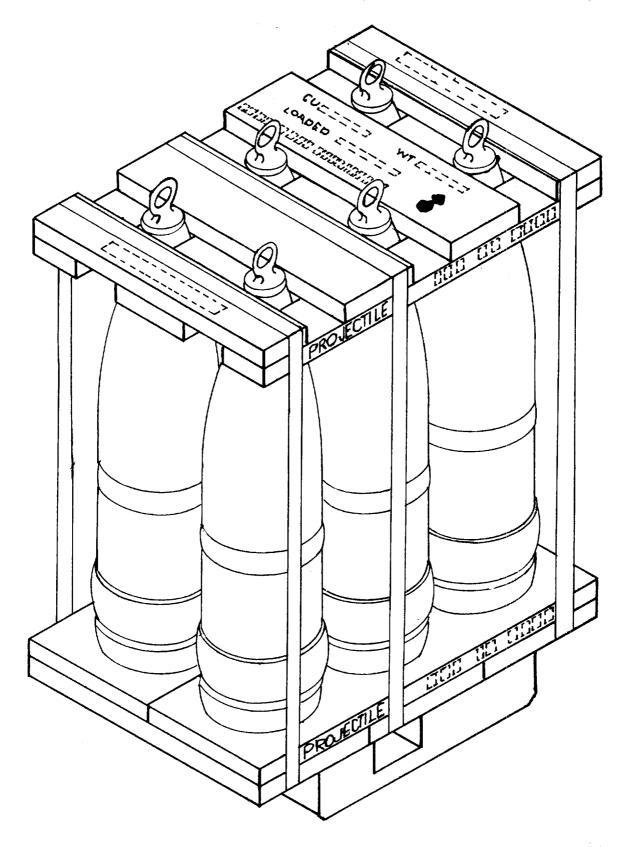




PROJECTILE, 155mm, GAS, PALLETIZED, IN STORAGE



PROJECTILE, 155mm, GAS, GB-2, BINARY, XM687, PALLETIZED



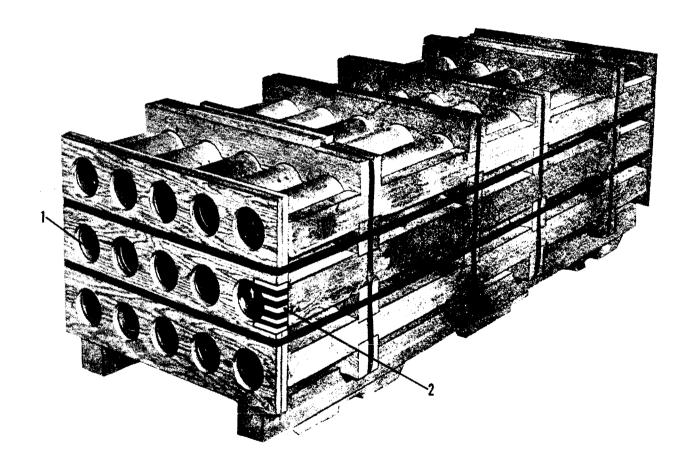
PROJECTILE, GAS, 8-INCH, PALLETIZED

1. Rear end cap

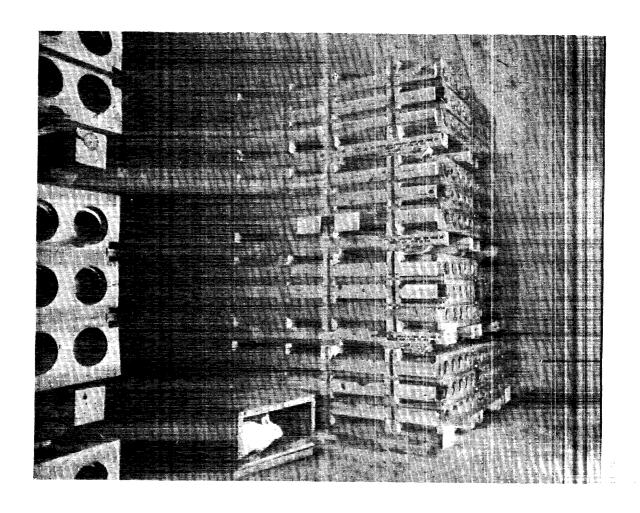
2. Indexing ring

3. Front end cap

Figure 2. Typical shipping-and-firing container.



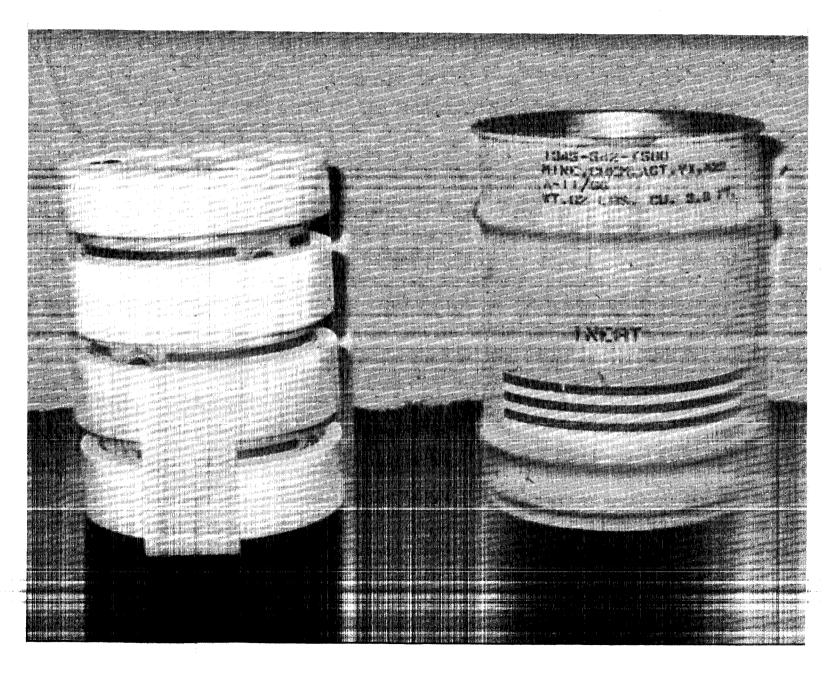
SHIPPING AND STORAGE CONFIGURATION, ROCKET, CHEMICAL, 115111, M55 (GB AND VX FILLED)



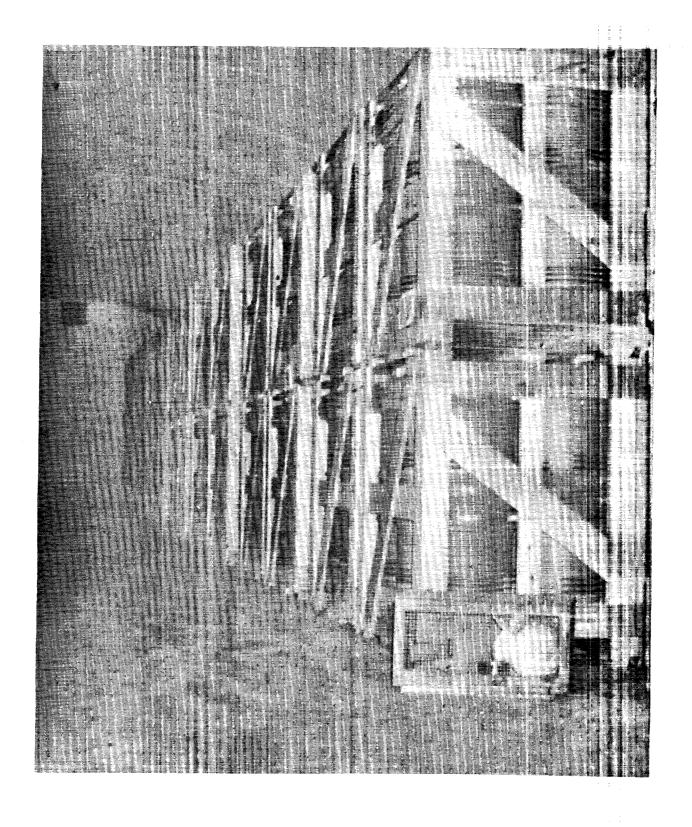
ROCKET, 115mm, GAS, PALLETIZED, IN STORAGE



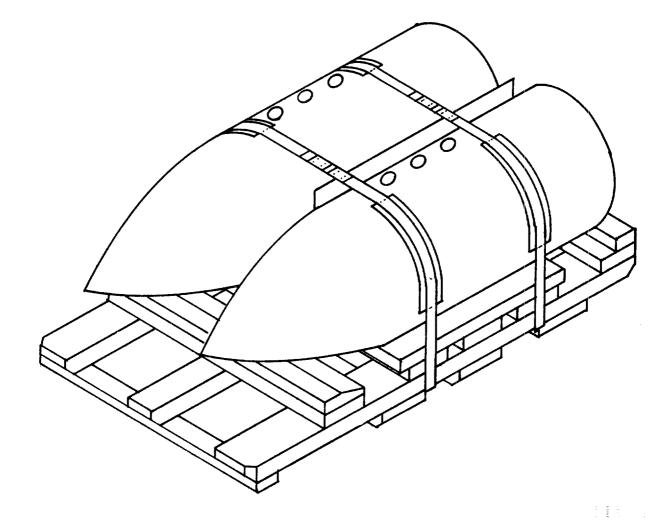
CONTAINER, MINE, 2-GAL, VX, ABC-M23

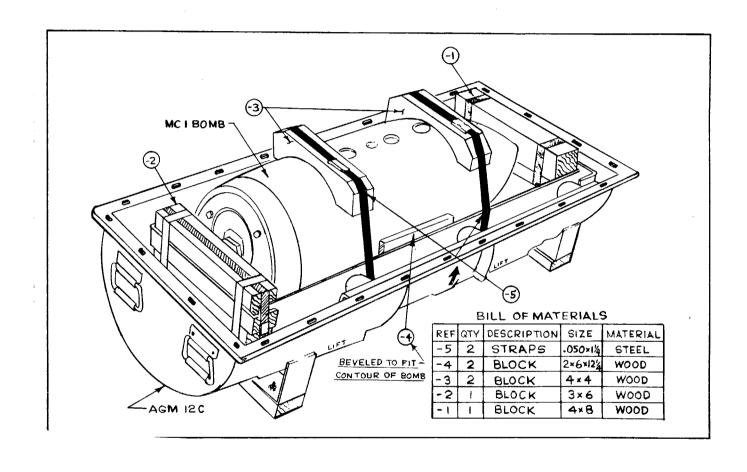


CONTAINER, MINE, 2-GAL, VX, ABC-M23

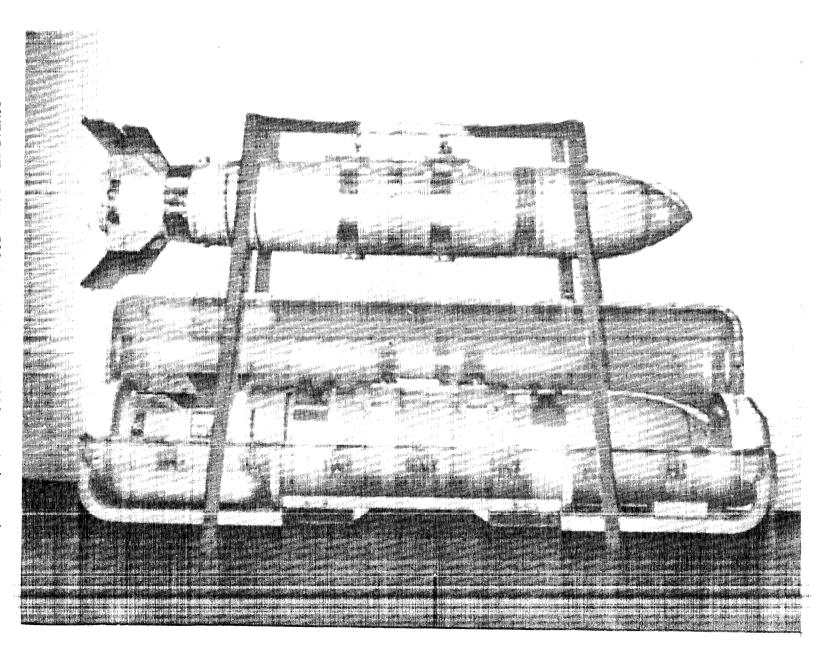


CONTAINER, MINE, 2-GAL, VX, ABC-M23, PALLETIZED

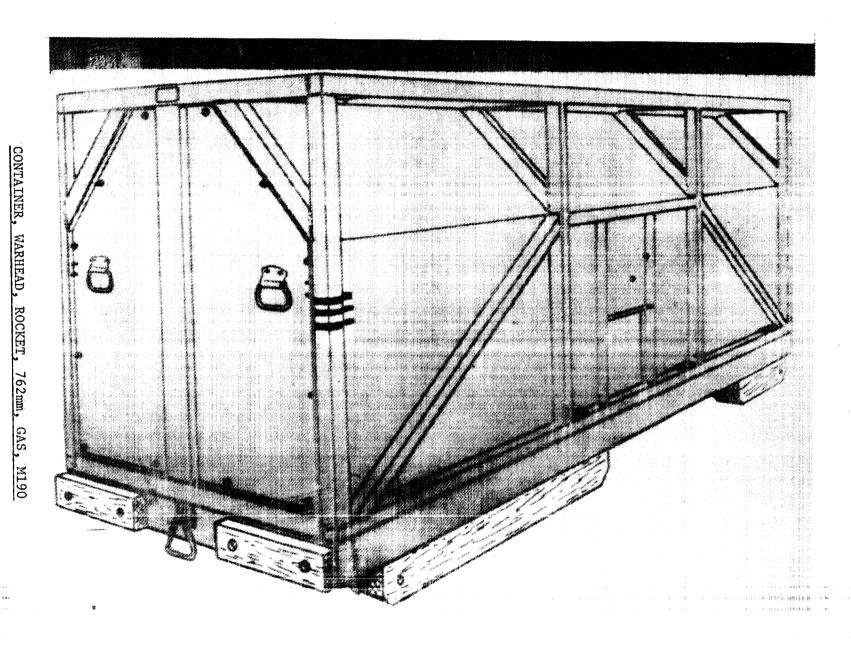


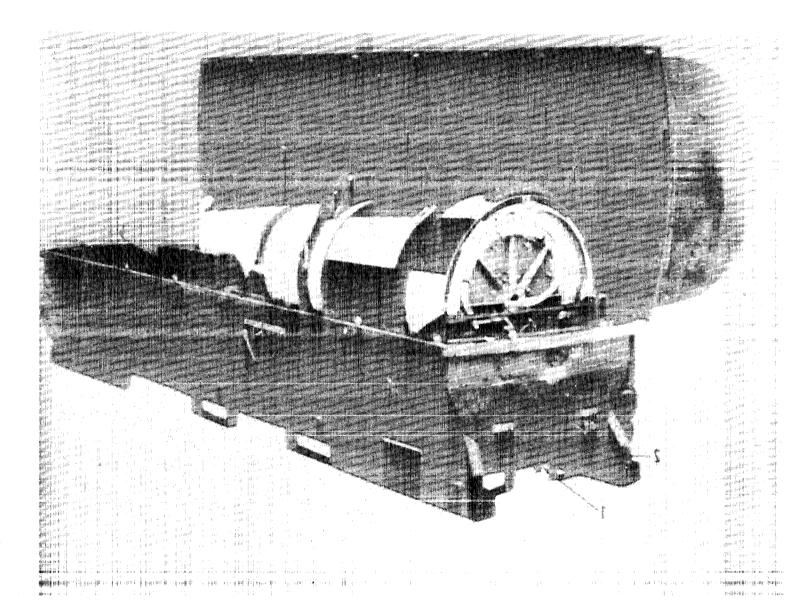


MC-1 GB GAS BOMB IN AGM-12 MODIFIED SHIPPING CONTAINER

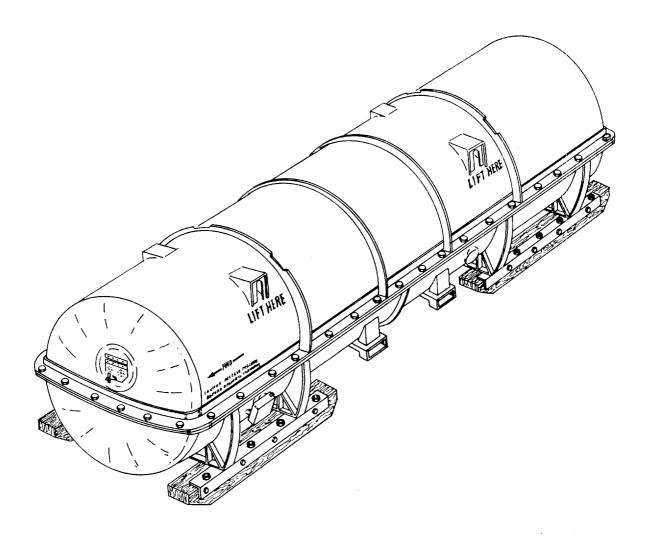


CONTAINER, BOMB, 500-LB, GAS, GB, MK116 MOD-0 (WETEYE)



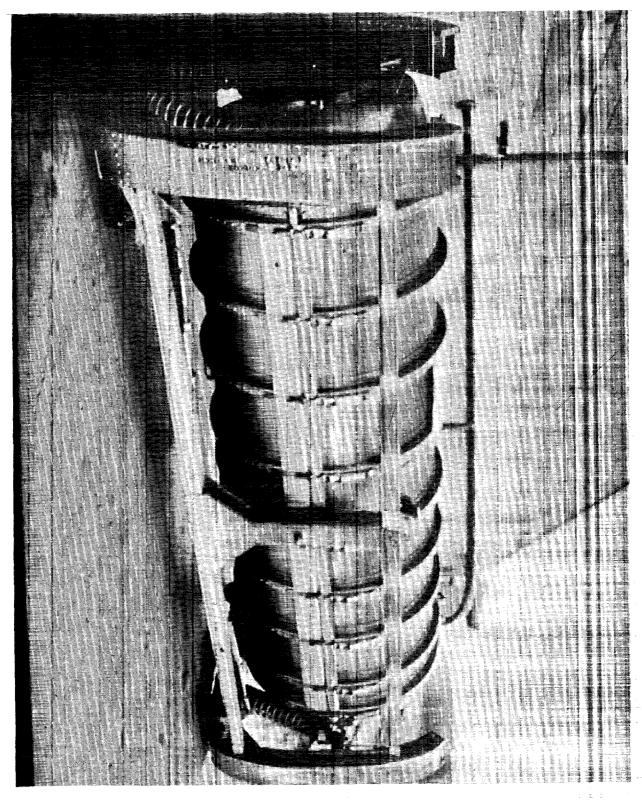


CONTAINER, WARHEAD, GM, SGT, GAS, M212

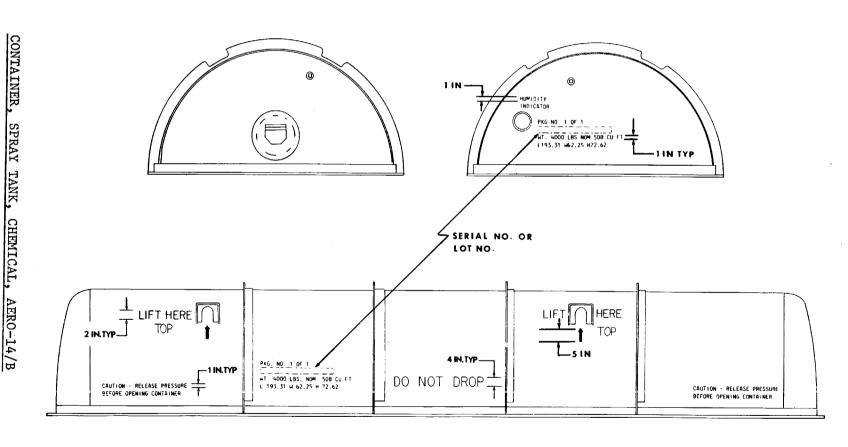


CONTAINER, SHIPPING AND STORAGE, CNU-77/E23, FOR SPRAY TANK TMU-28/B

CONTAINER, SPRAY TANK, CHEMICAL, AERO-14/B



CONTAINER, SPRAY TANK, CHEMICAL, AERO-14/B



MARKINGS - UPPER CONTAINER ASSEMBLY